THE OIL WEEKLY

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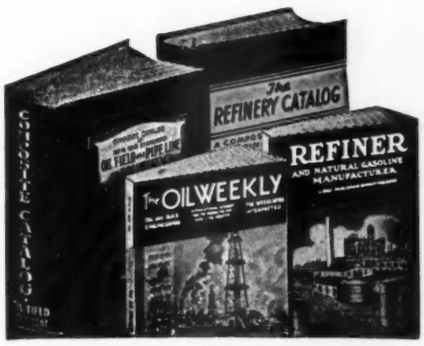

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The Oil Man's Calendar

APR.	
14	Interstate Oil Compact Commission, New Orleans.
15–17	Southwest Gas Measurement Short Course, University of Oklahoma, Norman.
16–18	Western Petroleum Refiners Association, Hot Springs, Ark.
17–18	American Petroleum Institute, Division of Production, Eastern District, Pittsburgh.
23–25	Petroleum Industry Electrical Association, Tulsa.
23–25	Natural Gasoline Association of America, Dallas.
24–25	National Petroleum Association, Semi-Annual Meeting, Cleveland.
MAY	
2– 3	Petroleum and Natural Gas Conference, State College, Pa.
5– 8	American Gas Association, Natural Gas Section, Dallas.
10–11	West Texas Geological Society, Spring Field Trip, Fort Worth.
19–22	American Petroleum Institute, Mid-Year Meeting, Tulsa.
26–29	National Association of Purchasing Agents, Chicago.
29–31	National Oil Scouts & Landmen's Association, Dallas.
NOV.	
2– 7	American Petroleum Institute, Annual Meeting, San Francisco.

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THE OIL WEEKLY

APRIL 14, 1941

VOLUME 101 NUMBER 6

The Changing Panorama

WHEN THE OIL WEEKLY made its estimates in January, last, as to the number of wells which would be drilled in the United States in 1941, based upon the information supplied by more than 100 leading oil companies, and said that apparently drilling would be off about 5 percent in 1941 as compared with 1940, we also said that in our opinion these oil companies might change their minds during the year and step up drilling to a point above that anticipated by them at the first of the year.

We still hold the opinion that there is an excellent chance that drilling will not decrease as much as it was thought it would at the beginning of the year. In California, where a rather drastic decrease was anticipated by the companies who drilled more than 40 percent of last year's wells, there has been no let up. On the contrary, well completions have amounted to more thus far this year than they did during the first three months of last year. Current California reports indicate that there may be an increase in drilling tempo there.

The real demand for crude oil has not yet hit the country, but it should come in September. The demand then should be greatly ahead of the demand last September—with Illinois production down materially. This will mean that Texas, Kansas and Louisiana, particularly, will be called upon to supply a big increase in crude oil. Only extraordinarily heavy imports from South America can keep this from happening. If this increase in demand does not have a decided effect on drilling we shall be very much surprised.

Technological Progress . . .

One of the best examples which can be cited to illustrate the remarkable advancements achieved in petroleum recovery methods is Pennsylvania's production curve.

Such a chart, which appeared in the March issue of "Mineral Industries," published by Pennsylvania State College, shows oil production in the state rose to a peak in excess of 30 million barrels annually in the early 1890's. The period following this flush yield was characterized by a steady decline, which by 1910 had become so great as to indicate that the end of production was in sight. Between 1910 and 1920, Pennsylvania's annual output was in the neighborhood of but 7½ to 8 million barrels. Since that time, gradual development of new methods of recovery has rejuvenated the industry, and without the assistance of new flush fields production has been brought back to levels approaching some of the better years of the past. Since 1920 annual production of Pennsylvania has grown rather steadily, and to 17 million barrels.

Here is an example of the salvaging of a failing industry by the application of new technology.

Enigma . . .

Secretary Ickes has advised Californians that no matter how effective their self-imposed curtailment, oil production there is still "hog wild" because the courts might find their arrangement collusion. A threat there of a suit action; and some more of what is hard to understand about the attitude at Washington. Harry Bridges can say what his longshoremen will produce in California and get Washington's blessing and protection. But if the Native Sons say what they will do, that is unlawful.

Mexico Rumor . . .

Rumors continue that a settlement may be imminent on the Mexican oil muddle. Confirmation as to how near settlement may be is not forthcoming, however. During the week it was rumored, without confirmation, that the matter of labor relations, compensation, etc., and export taxes on crude oil were two points as yet not settled.

Oil for Machines . . .

We speak of this being a war of machines. We say the mills and factories of a country are the real battle fields of modern war.

All this is true, but not completely so. Behind each machine is a mineral—often many minerals. Iron, copper, bauxite, magnesium, lead, nickel, zinc—many minerals enter into the fabrication of every modern device of peace and war.

And going further, it is oil and coal that run the finished machinery. Without these minerals, not a plane can fly, not a submarine or ship can go to sea, not a tank can move, not a piece of machinery in any factory can run.

It is natural resources that represent the real strength of a country.

Gleanings

Approximately half, or 390,000, of the 757,101 producing oil wells that have been completed since the industry started in 1859 are still producing today. • • • The recent increase in crude prices should result in a drilling spurt, for crude oil prices have always been the most important factor known in regulating the volume of drilling activity. • • • The industry on April 1 entered its heavier gasoline consuming season with approximately 3½ million less barrels of this product in storage than a year ago. With consumption up sharply, this means the industry for the first time in several years need not anticipate progressively lower gasoline prices; and in view of better prices therefore should show better earnings. • • • Approximately 98 percent of the 13,000 employees of Humble Oil & Refining Company and Humble Pipe Line Company have been given 5 percent salary increases. Magnolia Petroleum Company is another company that has given salary boosts.

EDITORIAL

THE OIL WEEKLY

APRIL 14, 1941

Vol. 101 No. 6

Caught Up and Fed Up!

By R. L. DUDLEY, Publisher

WE READ in a columnist's offering in a daily newspaper that the reason President Roosevelt has not taken a more decisive stand on strikes in defense industries, is that the President wants the country to catch up with him in his appreciation of the seriousness of the situation—that he really is not pleased at all with the disruption of defense plans by the deluge of strikes the country has been having.

If the columnist has gauged the situation correctly, then the President had better not go fishing again, because while he was fishing the country was burning up over the delay in defense industries—and this is one time when the country is away and ahead of the President, and he apparently does not know it.

Most of the strikes which have hit defense industries can be catalogued into three classifications:

1. Strikes caused purely by the spirit of opportunism on the part of labor leaders who want to take advantage of the country's peril to promote the cause of unionization. These men must be made to realize that the war in which we are engaged is not a war to promote the designs of any group of Americans—that industry has been drafted, that man power is being drafted into the army, and that the people will not stand to see some group, radical or otherwise, play the plight of this country to their own selfish desires.

2. Strikes brought about by racketeering labor leaders in whose minds the promotion of union labor is secondary to their own financial gain. These are the men who impose outrageous initiation dues on men who are forced to join unions to hold defense jobs, are then fired to make way for more "joiners," all to the immediate advantage of the racketeering labor leaders.

3. Strikes which have behind them foreign money. It is difficult to determine which of the strikes fall into this category, because proof is hard to get, although we hope that the FBI is busily engaged in getting it. To assume that Germany and Russia regard the United States as "holy ground" on which they may not practice their fifth-column activities is to assume an absurdity. The best plan Germany can follow to interfere with our aid to Britain and her allies—now our own allies—is to slow down the stream of munitions. Do not imagine for a moment that Germany does not realize this. That there will be willing tools for this service available among some Americans and some who are not native born, is evident.

In any event, whatever may be behind a strike, the American people will not believe today that workers in this country are being employed at starvation wages—and whatever is behind a strike in a defense industry, the effect is such a strike is to give relief to the enemies of democracy.

The people of the United States realize this—even more than their President apparently does. They have vividly before them the Lesson of France. Four things contributed to the fall of France: Politicians who put selfish interests ahead of their country's good; radical labor elements who put selfish things ahead of their country's good; industrialists who put selfish things ahead of their country's good, and finally, a non-interested citizenship.

Here in America today we have an awakened citizenship. If you doubt this, remember the overwhelming majority votes in the Texas and Oklahoma legislatures when legislation designed to protect defense industries from outrageous labor action came up for a vote.

We think that the President has failed for once in his political acumen when he ascribes all power to the leaders of both the C.I.O. and the A. F. of L. We think that, generally speaking, the rank and file of American labor is more patriotic than most of the labor leaders. We believe that there is as much disgust among the rank and file of labor with the sabotage of defense as there is among the rank and file of those who do not belong to labor organizations.

If the present labor leaders, or most of them, do not come to realize that they are a part of a country at war, and that the war is not something arranged for their special advantage, they can expect one of two things—a rebellion on the part of their patriotic members, or legislation on the part of Congress which will be most damaging to union labor.

Recollections of a Nationalization

By a Former Manager of Russian Oil Properties

THE HISTORY of Baku oil sovietization, as observed first hand by the author of this unusual article, is presented to readers of The OIL WEEKLY because it pictures a most interesting chapter in oil history about which little or nothing has ever been published. It has its present day application in that it shows the results of extreme radicalism, when it is dictated by class hatred and ignorance. Crammed to the brim with human interest, citing incidents and names, the article is a real contribution to petroleum history. Obviously it would be unwise to disclose the identity of the author, but it is enough the say that his former intimate association with the Russian oil industry and his present position in the American oil industry thoroughly qualify him for the observations he has made.

I AM not sounding an alarm. Nevertheless, in this period of intellectual vacillations and amateur statecraft it pays to be careful. To that extent I admit that I am very much like the cat of Mark Twain's creation, the one that having once found itself on a hot stove refused to approach even a cold stove.

An inherently totalitarian phenomenon is taking place the world over. Petty troopers turn into dictators, ex-tailors into statesmen, high-pressure gigolos into political party leaders. A stunt, an utterance, a fragment of a thing in place of the whole, a moment's attempt in place of a long life of labor, and presto, an upstart's career is made.

Hail Hitler! Hail Stalin! Bravissimo Il Duce! Three cheers for any son of a gun! . . . The ear flapping and eye blinking average man does not suspect the leveler's victory and, damn it all, does eagerly partake of the highly spiced free lunch, slyly offered by the demogogues as a bait for submission.

"There is a Russian odor in here," says an old Slavonic tale, and indeed, not only twice effected recognition was granted the Soviets (1933 and 1941) which condonation they did not merit in the least, but a thorough communistic reincarnation is taking place. And it does seem possible that an unlooked-for offspring of political surgery is going to appear on the American scene, a franklinstein, or frankenstein, of democracy, if you please, with the Russian head and American body.

It is a sad situation! It is tragic! Why and how does it happen that we of this glorious historically and in every other way commonwealth, the very name of which has for the last one hundred and fifty years been a sesame to the realm of happiness for untold millions of the oppressed, allow it to be put on par with the barbarous doings of Soviet Russia? Why and how can we listen to the insidious propaganda of the demagogues, inspired by and from that monstrous land of age-long and ill repute, the so called Union of the Soviet Socialist Republics, the union which is not a union, based on spontaneous actions, a soviet which is not in congress assembled, a socialist state which knows nothing of equality and brotherhood, and

finally a republic which is not of the people by the people and for the people, a God-forsaken land, representing a grotesque menagerie of 160 million bipeds who are not allowed to see, to hear, to say, but who stand up, sit down or whirl around in a kind of dervish dance, at the least whimsical movement of the little finger of one man, the jail- and tundra-hardened man, whose rise to power can be explained by the sheer lunacy of a war-and-famine-stricken nation.

Early Russian Oil

Organized in the early seventies of the last century, the Russian oil industry advanced by leaps and bounds. Until the advent of our Mid-Western fields it was the largest oil-producer in the world. Located on the barren territories of the Apsheron Peninsula, far away from timber lands and sweet water, it had to be created in the midst of almost unsurmountable difficulties.

In my first contact with it, shortly before the war of 1914 and after several years' sojourn in the American oil-fields, still enchanted by the impressions of America, I nevertheless sincerely admired the titanical work of Russian industrialists in this distant desert corner of the world. It seemed to me that by a magic wand these desert vastnesses were transformed into a modern El Dorado, a Bagdad of Haroun Al Raschid, a meeting place of Europe and Asia.

The wonderful panorama that I then beheld shall never be effaced from my memories. A kaleidoscope of magnificent edifices. Luxurious department stores, gorgeous oriental bazaars, with their motley hordes of picturesque traders from Samarkand, Isphagan and Bokhara. Sybaritic hotels with princely salesmen from London, New York, Berlin. Opera-houses with celebrities from Paris and Rome. Princely oriental nabobs mingling with the proud representatives of Russian aristocracy, blindingly bedecked beauties of Georgia, immaculately uniformed Czarist armymen, beautiful Arabian horses, cavalcades of the West and caravans of the East. Electric tramways, newly appeared limousines, and an atmosphere of intensified human intercourse. Business and gayety, concern and an utter abandon, the spirit of California gold-strike days refined and elevated by the administrative genius of the old regime and old intellectual Russia.

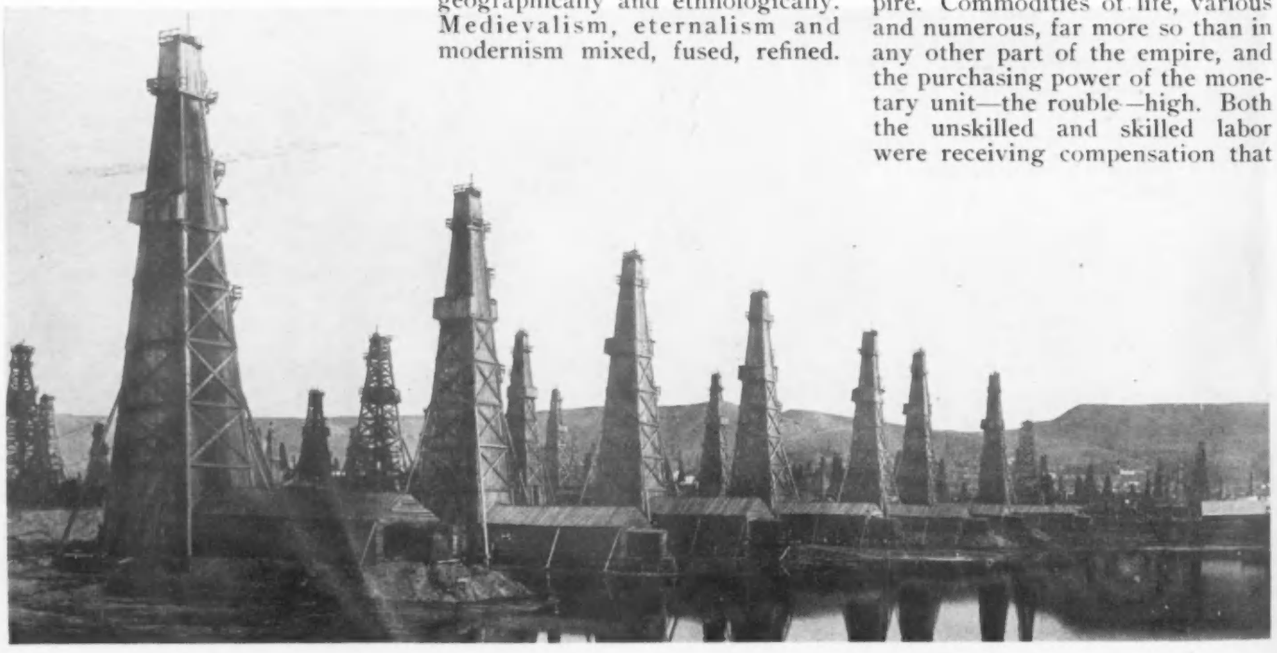
The city of Baku! The port of Baku! The oil of Baku! In the very spot of the ancient abode of fire-worshippers, the famous originators of the tale of Prometheus, the titan who stole the fire from heaven, the very first Edison of the Universe!

And then the forests of boarded-in derricks, innumerable chimneys and towers. Factories, refineries, rafts, boats, tankers, pleasure craft, locomotives, trains, bearing visitors from all European capitals, in luxury and comfort rarely found elsewhere. And a population, a veritable melting pot of races, nations and generations, historically, geographically and ethnologically. Medievalism, eternalism and modernism mixed, fused, refined. A junction on the highways of the world, the old and the new, connecting Iran, Afganistan, Turkestan, Trans and North Caucasus, Ural and Siberia. A source of inspiration for Rimsky-Korsakov and Ribinstein, Borodin. A truly international metropolis.

Undoubtedly Baku used to be in the old day Russia her most progressive center. In that city and in her industry of oil the comparatively lagging in Western progress of nations empire stood on equal footing with any of the countries of the West. And to an overwhelming extent this industrial and general advance was due to the activities of the so-called in those days Association of Oil Producers, an organization antedating the similar bodies in U. S. A. and elsewhere.

This organization was duly recognized by the crown and enjoyed all the authority required to advance methods of drilling, refining, marketing, standardization, etc. It regulated industrial relations, built schools, hospitals, settlements, roads, drainage tunnels, utilized waste products, published books and reports, maintained a statistical bureau.

Barring industrial disorders resulting from racial animosities, over which the organization could not naturally have control, all the industrial tenor of life was efficiently maintained by the organization. The pay was quite adequate, the relations between employers and men satisfactory, much more so in this industry than in any other industry of the whole empire. Commodities of life, various and numerous, far more so than in any other part of the empire, and the purchasing power of the monetary unit—the rouble—high. Both the unskilled and skilled labor were receiving compensation that



allowed the highest standards of living in all Russias. Even the immigrant laborers from Iran getting a compensation which in spite of its compared to American rates meagerness allowed them savings to the extent that on their completion of several years work in Russia they could retire to Iran permanently.

All of the oil men, from executives to lowest ranks, led comfortable lives. This general scale has never been surpassed. In fact Baku became in the short period of its modern existence a veritable dispensary for civilizing influences all over the adjacent regions and even today the majority of the best Soviet workers are those "educated" in Baku. This holds true of highest Soviet executives and the rank and file of their industrial workers.

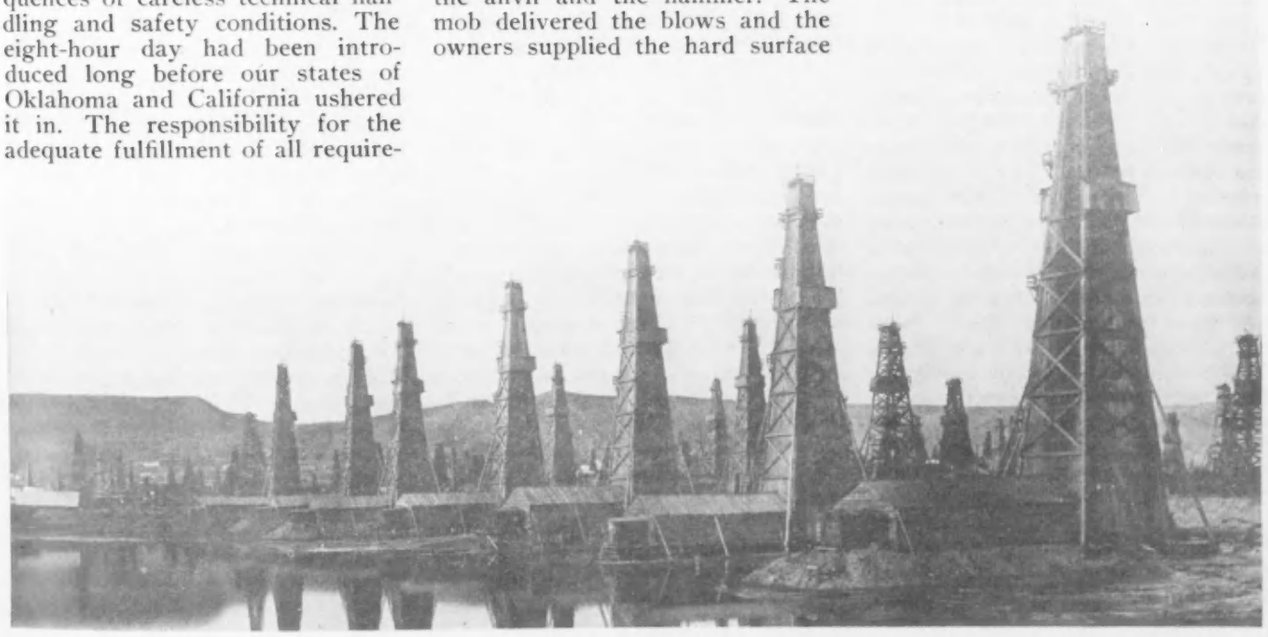
As in all cases of political propaganda the reports circulated in those days in U. S. A. of the "terrible conditions" under which the Russian workingman lived were very much distorted and exaggerated. Time and again I saw, and my American fieldmen gone to Russia with me will confirm the statement, that in general there was no more oppression, if by oppression one means a discipline, strictly required in the industry's normal life, than elsewhere in the oil industries of the world, U. S. A. included. In certain respects the labor out there fared much better. Take the case of industrial inspection for instance. Nowhere in oil fields was the labor so thoroughly protected with regard to consequences of careless technical handling and safety conditions. The eight-hour day had been introduced long before our states of Oklahoma and California ushered it in. The responsibility for the adequate fulfillment of all requirements of the Bureau of Mines and those of the Technical Inspection rested directly on the managers who faced in case of a breach an immediate fine, a heavy one at that or even imprisonment. And no one without technical training and examinations was allowed to manage or otherwise run industrial units. As a matter of fact the industry had at the time not less than 700 graduated engineers of all categories, and this at the time when all Russian production amounted to probably one-fifth of all American output.

Comes Revolution

When revolution took place in Petrograd, Baku peacefully acknowledged the change and for a time it seemed that there would be no change in the general run of the industry. But the presence in the ranks of considerable number of pseudo-liberals, bent on doing their stunts in the revolutionary repertoire swung the quiet movement to the extremes and the long, tiresome and uncontrolled harangues began en masse. Unionization, collective contract, sliding scale of wages, workingmen's committees, district soviets, six-hour day, etc, etc. . . . became the topic of the day. Then followed intimidation, confiscation and violence.

The managers remained in their places but the owners fled abroad. Thus the engineers of the industry were left to face the mob. And it was a very difficult task; they actually found themselves between the anvil and the hammer. The mob delivered the blows and the owners supplied the hard surface of non-existent legitimacy and responsibility.

From day to day conditions grew worse. Those among the oil workers who had the gift of the gab and voracious appetites came forward. They directed the drive against the remaining administration of the industry. Managers were shorn of their authority. Cars, carriages, horses, every conveyance, private residences, furniture, etc., were taken away from them. Various workingmen's committees, composed of the most valuable men in shops and fields, devoted all the so-called "company time" to prosecuting their "revolutionary" business, often consisting and devoted to their private needs and chores. General meetings of men were being held at all hours, no one thought of performing the functions they had performed heretofore. And the only thing they seemed to remember regularly was the pay-day with its pay. Woe to the manager who failed to gather up enough cash to pay off these non-productive "free citizens of the world." Such managers were arrested and held incommunicado until their associates would manage to get the money. The latter was depreciating rapidly and furthermore, Baku being cut off from the rest of the empire by the advent of the civil war, there was no money obtained unless an exorbitant rate of interest was paid for it. A general panic followed. Everyone began provisioning without any regard for others. Stocks of all commodities and foodstuffs were quickly exhausted and dis-



orders of most vicious nature began.

The newly entrenched bureaucracy of the soviets in Baku tried to do its best to feed the population. But ignorance and inexperience are poor qualifications for a social worker and much more so for the officers of the new government. We all faced starvation or murder.

The Turks Restore Order

And then the Turks came. . . . The Turkish army of occupation under Nourri-Pasha. . . . And did they restore the order? Oh, brother, they certainly did. And what was so impressive at the time they did not shed blood. It seemed that their mere presence was so formidable that the order just naturally came back, and it came back instantly.

We of the timid middle class began once more to breathe and to live. The revolutionary committees disappeared, self-appointed commissars evaporated, stores opened up, factories started to run normally and everyone, including the rank and file of workmen were satisfied. Instead of dreading the Turks, the "Asiatic despots," etc., etc., we were filled with sincere appreciation and respect towards them; it was a genuine pleasure to see in place of ignorant "revolutionary" state makers the thoroughly disciplined and experienced officers of the Turkish army, less Asiatic in character than even the orderly government of the Russian pre-revolutionary days.

All this happened just a short time before the Armistice was signed. By virtue of the latter the Turks had to evacuate the Baku region and for a year or so the natives of the region, the Azerbaidjanians, ruled the industry, feebly and ineffectively, but with due respect to the right of private property. Then one of the most fatal blunders of the age was committed by the Allies: collectively and separately they began to negotiate various agreements with the Soviets. Great Britain more than any other power broke away from the consistent policy of isolating the Soviets and under the pressure of her labor leaders did actually recognize the Soviet as the other party of numerous trade agreements with her, which meant in politics of that period a license for the Soviets for anything they might undertake with regard to gathering back into the Russian fold the most important border states just then declared independent. Thus Azerbaidjan and with her the Baku oil came back into the economic and political structure of the Soviets and factually saved them from a complete economic breakdown. There is no doubt that had it not been for the Baku oil industry, the only one preserved from the ravages of the revolution, the Soviets could not put down the civil war or resist the Polish attacks, then threatening to wipe out the whole communistic set-up.

Red Army Invasion

The Red army invaded Azerbaidjan without any declaration of war and the old story of sovietization of the industry of oil began immediately upon the entrance of the Red army. And this time it was not a more or less gentile process of sequestration along the lines of peaceful law enforcement but a brutal, vehemently brutal grab of everything by means of an absolute martial command and bullets. The unheard-of freak of a revolution, the triple combination of terrorist, governor and petroleum engineer appeared on the stage in the person of the commissar, presiding over the Azerbaidjan Soviet. Everything and everybody was in his power and he was all in all.

The feeling of security that was brought by the Turks was no more found. On the contrary some people on seeing the entry of the Soviet hordes did actually die in their tracks. My venerable chief, a nationally known mining engineer and director of many industrial concerns, Ivan Durneff, was one of them. And undoubtedly this was better for all concerned; the men of old regime did not thus undergo tortures and the Reds saved bullets and time.

Almost immediately upon the occupation of Baku the Reds issued their order No. 1, a decree noted for its ferocity and lack of understanding of realities. It read as follows: "All enterprises, producing, refining and manufacturing respectively, oil and oil derivatives, are hereby declared as owned by the state. Oil trade is from now on a state monopoly. All management of the industries rests with the commissariat. All authority and duties of the Association of Oil Producers are transferred to the commissariat. All labor and employees, including the executive and technical personnel are commanded to continue their work uninterruptedly or else face the consequences according to the laws of revolutionary period. The decree has instantaneous action upon its publication. Signed: Narrimanov, Presiding Commissar."

Of whom was the new executive bureaucracy composed? Of what by American standards one is bound to call the scum of the earth. The eternal malcontents, half-baked intellectuals, petty clerks, agitators, shady characters of the past regime and out and out extortionists. The most obnoxious individuals well known to the criminal police of orderly days became the satraps of the new regime.

Using a foul language, uttering memorized maxims of sovietistic philosophy, spitting in endless stream the shells of continuously eaten sun-flower seed, the proletarian dictators, or the dictators of the proletariat rather, came in all their glory.

It did not take long for the rank and file of the Baku labor to realize that they all had been gypped; in place of a free and common ownership of the means of production and distribution they were given a slavedom, a state of life not to be compared with anything they had known in the past, cruel, whimsical and entirely devoid of common sense.

Ignorance, inexperience, blended with cruelty and suspicion are the most potent agencies of destruction. They spell death.

But let us return to nationalization. The order No. 1 did not mention anything about the taking of inventory of properties. Only two months after it there appeared a belated order telling of the immediate taking of an inventory of materials, tools, etc. By that time things had disappeared. Years afterwards upon my escape from the Soviets I saw various oil field paraphernalia in such distant places as Tehran, Iran and Bagdad, Iraq. Then three months after nationalization a decree was published regarding the hand-operated properties (shallow hand-dug wells) which were quite numerous in the vicinity of Baku. The owners of these properties, very much like the subsidized organizations of our New Deal, had been drawing subsidies on par with colossal concerns, whose oil-production exceeded them by ten thousandfold.

This decree did actually denationalize the hand-operated properties, leaving them on their own, as perfectly negligible producers, which of course killed them eventually entirely.

And then again in the fourth month of the dictatorship there came another comical decree. It demanded an instant return of the following articles, not found in due time in the warehouses and on the racks of various concerns of olden days: anchors, chains, cables, ropes, flags, lanterns, motors, lighting units, pumps, blankets, pillows, various high-grade lubricants, mattresses, chairs, nails, brushes, brooms, switches, bolts, etc. I have given this order the way it appears in the original. The above mentioned instance of finding oil-field articles in Iran and Iraq reminds me of the statement made in Bagdad by a representative of an American export concern. "Not only did the Soviets confiscate our stores in Russia but they actually exported our machines to Near Eastern countries and sold them at prices very much below our standard rates." In fact for several years after the nationalization not only oil-field articles but bicycles, sewing machines, phonographs, pianos, wind instruments and the like could be bought by way of the Soviet exporters par excellence.

Engineer in Charge

A certain Serebrovsky was put in charge of the oil trust formed out of the private concerns of old days. He was a trained engineer and as such was intelligent enough to see straight, at least in the immediate environment of Baku realities. He came to U. S. A. in 1924 I believe. And the reception given him by our supply houses was gorgeous. Commerce welcomes strange customers of course. He bought a lot of machinery. He tried his best. But he is dead now, the victim of a purge. The following utterance of his on the occasion of a Soviet anniversary did not help him after all: "Comrades, in two years America will have 15 million unemployed. Overproduction in that country is so overwhelming that there is nothing for the American workman to work at. They are destroying grain there. American bourgoisie is perishing. Our objective reasoning makes us conclude that the proletarian production will force out the private interests in a very short time. It is evident that the proletarian economy is in all respects more fruitful and perfect. Heretofore these were only theoretical suppositions but today they are all proved to be correct, a reality, a fact! And the most important role in this struggle for supremacy belongs to the Baku oil, which like a final counterweight swings the balance indicator in our favor." This I quote from the Russian oil-journal "People's Economy," p. 6, issue No. 5.

The then nationalized oil industry was managed through a central collegium with branches in various districts. It consisted of mixed boards of technological bodies, labor unions and political bosses, in this case the communists only. And the first phenomenon of the dictatorship of the proletariat was the quite evident fact that the proletarians ran away wherever and whenever they could. The Persians, who in majority of cases labored in lower ranks were the first to cross the border into their native Iran, then skilled labor and therefore more intelligent then the rest of oil field help made their way into other parts of the Union where they thought they would not be so oppressed. Finally a considerable number of geologists and engineers escaped abroad.

Serebrovsky resorted then to the importation of foreign technicians and drillers. And along with the American machinery a significant number of American oil men came to Baku. Their experiences in Russia have been duly recorded and are interesting in so far as they show how under the influence of a propaganda sane types of men are deceived into traps. It must be stated, however, that the Soviets profited from the foreign aid considerably. Indeed supplied with up-to-date machinery, resorting to militarily enforced labor and arbitary in the whole gamut of industrial action and planning they put the oil industry on tolerable basis. Even the export of oil was resumed from Batum on the Black Sea almost immediately after Lloyd George signed a commercial treaty between Great Britain and the Union. Later on, due to the short-sighted policy of our industrial leaders and through their aid a considerable number of communists were imported into U.S.A. to study the American methods of drilling, exploitation and refining.

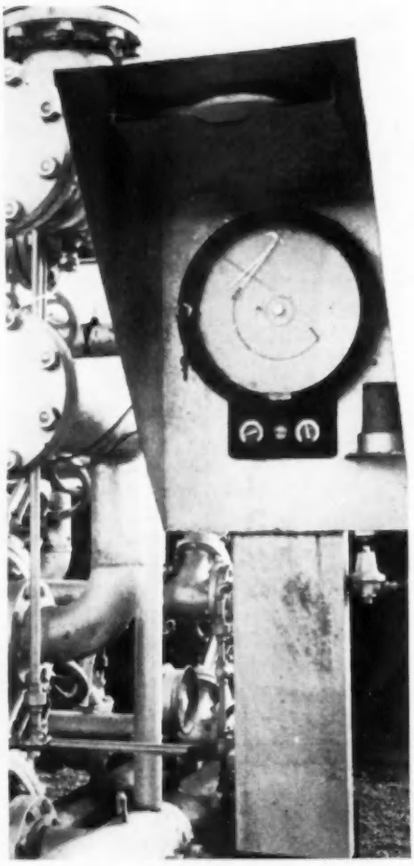
This catering to the communists by the "arch-capitalists" had very demoralizing results on our field men. This I can prove by my own observations among the various groups of oil men. In one case such a traveling party of communists was brought right into the midst of a rotary crew, one member of which had been once upon a time a prominent executive of Baku industry in Czarist days. To the credit of that Russian it should be added that he on his own initiative raised such a rumpus on the premises that not only the communists but even his immediate American boss thought wise to disappear into space, and that in a jiffy.

These technical excursionists are in no case allowed to travel abroad with their families. The latter are invariably kept in Baku as hostages. One of them I recall refused to return to Baku and rather than endanger the lives of his kin he suicided in Tulsa, Oklahoma. During my stay in Persia a world-famous Russian oil man, Tagionossoff, arrived there to conduct certain oil transaction with the Persians. He was at all times accompanied by a disguised G. P. U. man and no one of the Russian immigrants in that place was permitted to see him. Another industrialist, a certain Khoshtario, who was Krassin's private capitalist friend, was so unnerved when he received a telegram from Moscow asking him to come from Persia for a conference that he actually obtained a medical certificate testifying to his peculiarly rare affliction which kept him from visiting Moscow. A periodic purge was going at the time in the Russian capital and the Soviet industrialist played safety first.

In the offices of the Soviet oil trust in 1923 I met quite a few of the former captains of the oil industry of Czarist days. They would not recognize me. My bourgeois appearance, decidedly prosperous and independent, turned them away from me. They had to act infinitely hostile to me to do away with possible suspicions of the communistic overseers. I might have been a servant of the capital, an economic spy, an agent of the White Army, etc. These former general managers, presidents and directors of olden days bent over their desks and worked their souls away for all they were worth, and not in the manner of petty secretaries scared by the approach of a boss but in the manner of the miserable creatures dreading a disaster, an inevitable fall into the abyss.

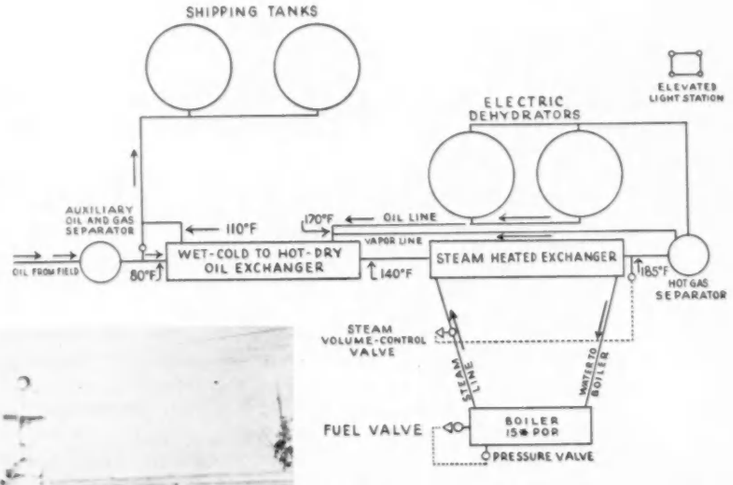
Automatic

Crude Treating Plant Operates Continuously Without Attendant . . .

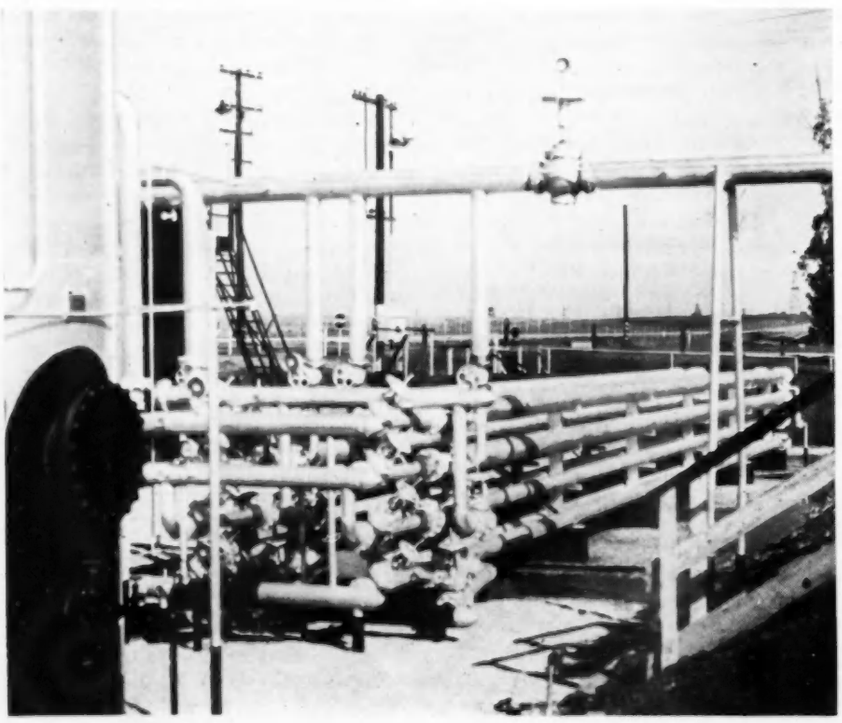


To treat emulsified oil continuously for an indefinite period with only a minimum amount of attention from field men, Union Oil Company recently placed in operation a completely automatic plant on its Austin lease in the Dominguez, California, field. Not only is the plant sufficiently automatic to require no permanent attendant, but a number of helpful features not ordinarily found in similar plants have been installed.

Particular care was used in selecting the location. The site selected is at the junction of two main thoroughfares over which field men travel regularly in going to producing leases from the main field office. Means are provided so field men could quickly tell by visual observation whether the plant is operating satisfactorily. The usual type of operating pilot lights installed at electric dehydrators are used. However, instead of



Sketch of Union Oil Company's automatic crude oil treating plant at Dominguez, California.



The recorder-controller shown at top, maintains a predetermined temperature on oil flowing through the treating plant. It actuates diaphragm valve on raised steam line, see photograph at left, and thereby governs the volume of flow from the boiler to the heaters shown below valve.

putting them on the vessels themselves, they are on a bracket attached to a sufficiently high pole, at one end of the setting, that visibility from any direction is increased. Switches to control the flood-lighting circuit are on a panel at the entrance of the plant, so a guager or operator driving to the treater at night can easily turn them on.

The plant, besides auxiliary equipment, contains:

Two electrically operated dehydrating vessels, for removing the water from the oil.

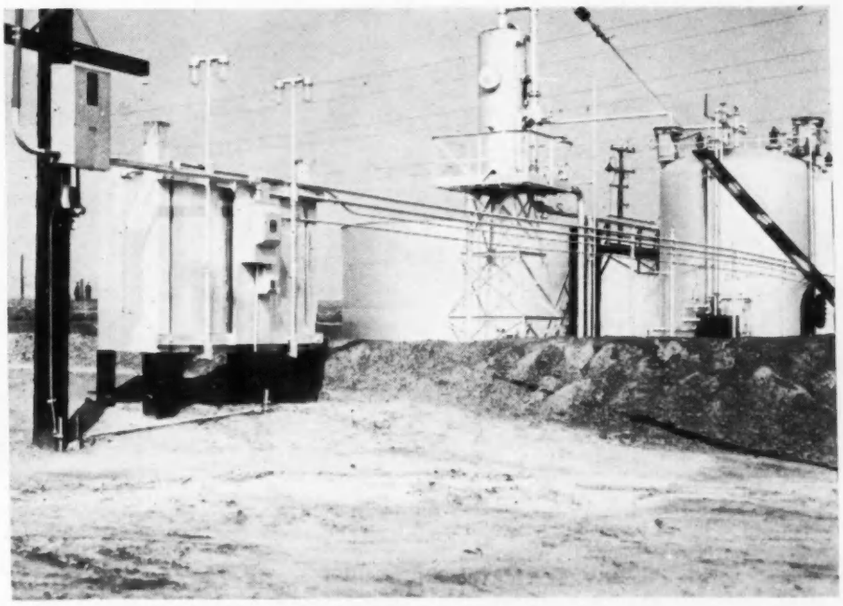
Two oil and gas separators, one of which removes the free gas and the other removing the vapors produced by heating of the oil.

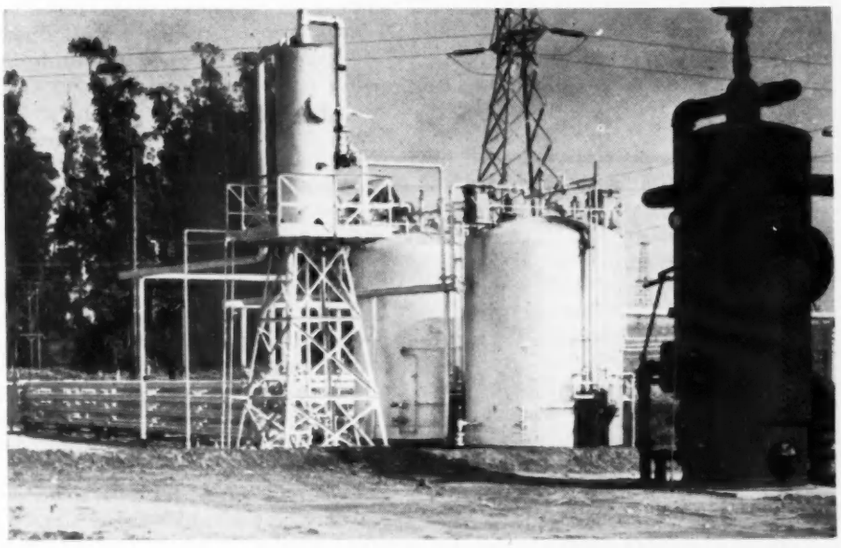
A double setting of oil heaters and coolers, one section operating on a cold-and-hot-oil exchange and the other on an oil-and-steam exchange.

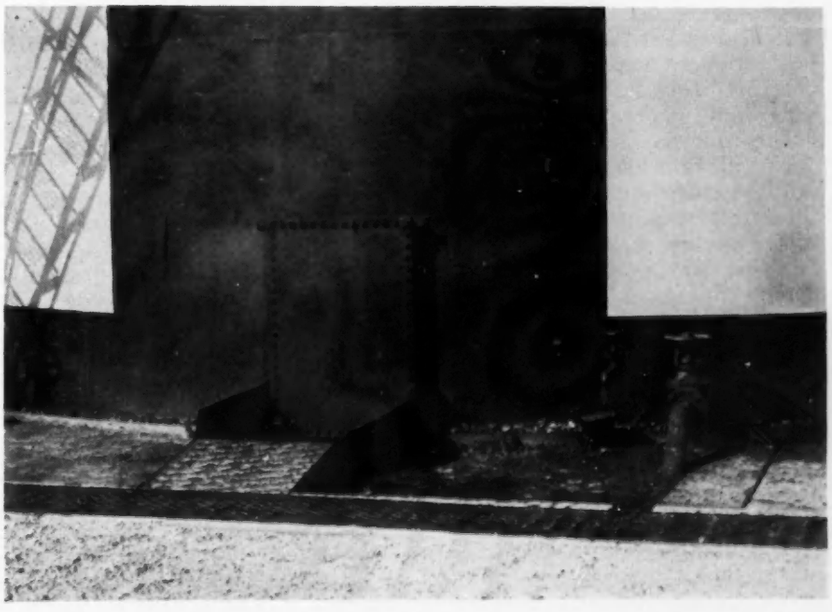
One common oil field type boiler equipped to operate at a maximum pressure of 15 pounds.

Two stock tanks, one to receive the oil from the treater while the other is being emptied into the pipe line.

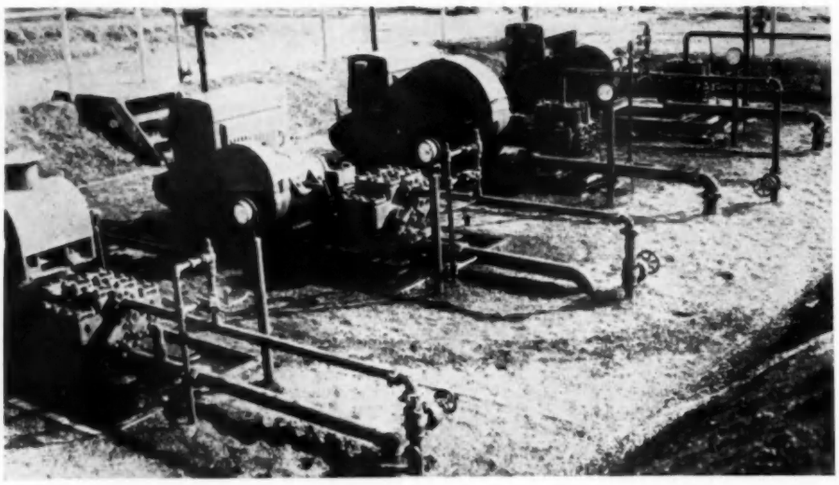
About 1600 barrels of fluid are being treated daily. It is produced from a number of wells, some of which produce oil that is cut as little as 1/10 of 1 percent while others range upward to 36 percent water content. All fluid is led from the individual oil and gas separators to a manifold outside the firewall surrounding the treating plant. The fluid passes through the manifold to a separator, where gas is further removed from the oil before entering the plant itself. A by-







Two electric dehydrator operating pilot lights are installed at a point most visible from all directions, as shown in the view at top. In addition the plant is well floodlighted, switches being at a point convenient from the road. The middle picture shows the auxiliary gas separator (painted black), the two electric dehydrating vessels, raised separators for taking off vapors created by heat, and part of the exchangers. In the bottom picture is shown location of drain, sample and service lines of the stairway side of the stock tanks. The cleanout manhole is fitted with metal conductor to drainage ditch to facilitate cleaning. Grate-covered concrete-lined ditch carries sludge to sump.



Gas engine driven pumps for moving the treated oil from stock tanks to pipe line are located below level of tanks, and therefore always operate on a flooded suction.

pass, installed in the flow system just beyond this separator, provides means of diverting the fluid directly to the stock tanks without going to the treating plant if for any reason this becomes desirable.

In passing into the treating plant proper, emulsified oil moves from the auxiliary oil and gas separator into the double bank of exchangers. In the first section, where the temperature of the cool oil coming from the field is increased from 80° to 140° F. and the returning already treated oil is reduced from 170° to 110° F., the stream of cold oil is counter current to the hot oil flow. While the dry treated oil flows from this hot-cold oil exchanger section to the stock tanks, the untreated oil then passes into the steam-heated exchanger section, where the temperature is boosted to 185° F. by the time the outlet is reached. Since the oil, which averages 32° A. P. I. gravity, produces vapors at this temperature, it passes through another separator where the vapors are flashed off so as to by-pass the dehydrators. This separator is on a tall structure so the pressure on the system, plus the fluid head, forces the oil to the dehydrators. Dry oil leaving the dehydrators passes through a line back to the hot-cold oil exchanger, with the vapors from the flash separator reentering the flow stream just ahead of the exchanger. The vapors from the separator go back into solution when the temperature is reduced to about 110° F. With this vapor flashing arrangement, only degassified fluid will flow to the dehydrators, which increases the efficiency of the units materially. The dry oil flows from the outlet of the hot-cold oil exchanger to the stock tanks.

Water separated from the fluid is recirculated by a small motor-driven centrifugal pump. This holds the emulsion cake layer, which invariably lies between the water and the partially treated oil, to a minimum and permits the electrodes in the electrified zone to remain clean. It has been found that recirculation of the hot water through the vessel helps provide effective treating. The quantity of water separated averages 7½ barrels per hour.

Each exchanger section is composed of four 60-foot long 6-inch pipe shells (total of 240 feet) with seven 1¼-inch internal pipes in each shell. The exchanger manifold is designed so either section may be used individually or parallelly.

The ground surface slopes sharply from the heat exchangers to the steam boiler, making it possible to operate the boiler without a feed pump. The difference in elevation being sufficient to permit the condensed steam, taken off at the outlet end, to gravity back to the boiler. The boiler is set with the mud-ring flush with the surface of the grade on a concrete pad, which is fitted with a combustion space beneath the blow-down side of the fire-box. Gas for fuel is reduced in pressure by a steam-operated pilot diaphragm valve that maintains constant steam pressure by controlling the fuel.

The steam line between the exchanger and boiler dome runs overhead on an "A" frame fabricated from pipe. In this line, near the exchanger inlets, is a control valve that regulates the volume of steam passed from the boiler to the heaters, thus providing a means of having a constant predetermined temperature. This steam-control valve is actuated by an adjustable recorder-controller, located on a small panel at the control end of the steam exchangers. The steam control valve is protected from the weather by a hooded cover, in which is a receptacle for unused charts.

All pipe line connections at the two stock tanks are on the same side with the walkway and ladder. Grouping of the connections in this fashion allows a gauger to quickly determine which line is open or closed. Rising steam gate valves are employed on all the tank lines, so the stem above the wheel serves as a flag or "in use" signal.

Two inlet connections are welded to each tank, one for untreated oil whenever it may be diverted directly to the tanks without entering the treating plant and the other for treated oil coming from the plant. The tank outlet connections are on the opposite side of the cleanout manhole, beside the bottom drain and sample connections.

A concrete-lined trench, for carrying surplus water from the treating units, runs in front of the stock tanks and provisions have been made for emptying tank bottom drainage into this ditch. Metal ducts with raised sides extend from the manholes to the trench, and sludge can be flushed out whenever desirable to clean the tanks. This arrangement prevents marring of the tank or surrounding area. The sludge trench, which is covered with steel grating, leads to a concrete sump. Fluid is pumped from the sump as required by a motor-driven duplex pipe-line pump. A float installed in a well at the sump controls the fluid level, being connected to a mercury switch that closes the circuit to the motor when the fluid rises to the pumping-out level.

The sump pump and stock tank shipping pump units are located outside the treating plant fire wall. The pipe-line pumps are lower than the floor of the stock tanks, so they operate with a flooded suction at all times. The pipe-line pumps, which are not automatic, are run by multi-cylinder gas engines.

It will be possible to double the present capacity of the treating unit when this becomes necessary, without disturbing the equipment now installed.

Earnings Outlook Favorable As Markets Improve

By L. J. LOGAN, Associate Editor

AFTER rising in 1937 to a record-breaking peak (about the same as in 1929), oil company earnings dropped sharply in 1938, but they subsequently improved gradually in 1939 and 1940; and for 1941 further recovery is in prospect. The extent of the additional improvement for this year is conjectural, but it is conceivable that the earnings of 1941 may approach or equal those of 1937, in view of the noteworthy strength of present markets for both crude and refined oils.

Even 1940 would have compared favorably with 1937 if early results could have been maintained, but as the year progressed, loss of export business and depressed gasoline prices greatly restricted earning power.

This year,, however, may bring a realization of possibilities that failed to materialize last year.

This prospect has developed in the past few months as demand for petroleum products has expanded remarkably, while markets for both crude and refined oils have improved materially.

Companies of the industry will produce, refine and sell record-breaking quantities of oils this year, and along with increased volumes of business, they will have the additional advantage of realizing better prices, unless market conditions undergo an unforeseen and unlikely change for the worse.

Refiners Should Receive More

Following the increases of March 29-April 1, crude oil prices are about 5 Percent higher than they were during 1940; and solely producing companies are promised materially better net income by virture of the higher crude postings and the larger volumes of crude production that will be required in meeting this year's unprecedented demand for petroleum products.

Companies that engage in refining henceforth must obtain slightly higher prices for their finished products if they are to be compensated for the moderately higher cost of their raw material. But the markets for refined products already have improved somewhat, contemporaneously with the advance of crude prices, and further gains are in prospect. Consequently, even companies that purchase all or large proportions of their crude requirements remain in as favorable position as previously, and further improvement of product prices should react to their net advantage. Integrated companies that produce all or large portions of their needed crude will have full advantage of current and future improvement of product prices, with the changes in crude postings of only minor significance for them.

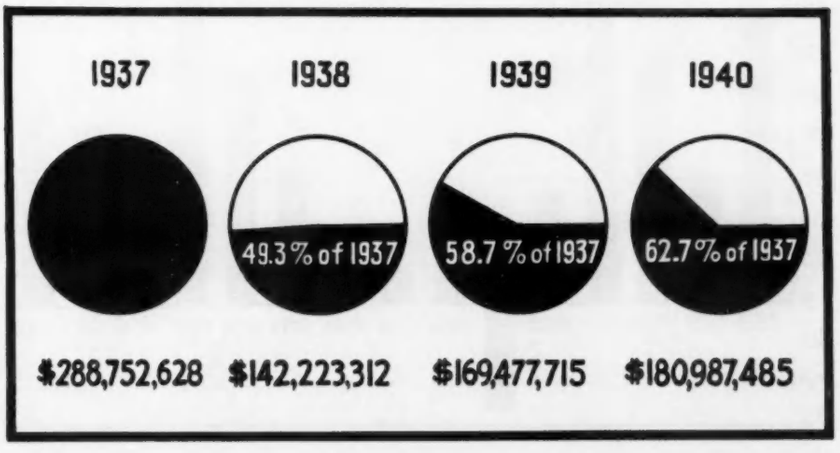
The picture of earnings in 1941 apparently will be in general outline the reverse of that covering 1940, although different in detail and more favorable on the whole.

Last year, earnings were exceptionally good in the first 4½ months, largely in reflection of good prices of gasoline and other products. But then gasoline prices broke sharply, and they continued extremely low the remainder of the year; and earnings were correspondingly circumscribed. The average tank car price of gasoline was around 5¾ cents a gallon from January 1 through about April 20, 1940, but then a sharp break to about 5¼ cents occurred, about the time of the intensification of Europe's war and the simultaneous realization in the United States that gasoline stocks were seriously excessive. Low prices of gasoline prevailed, moreover, until the end of the year.

This year, in contrast, prices of gasoline (and of some other products, such as lubricants) were low as the year opened, but soon began to improve gradually. Nevertheless, the average tank car price for January, February and March was only about 5¼ cents a gallon, or roughly the same as in the closing months of 1940. And henceforth there must be substantial further improvement of product prices if averages for the year are to equal or exceed those of 1940, although,

Earnings of Oil Companies Promise to Improve Further in 1941, Following Erratic Recovery of 1939 and 1940

This chart of the aggregate net profits of 42 oil companies shows results in 1937, one of the best income years in the history of the industry; the shrinkage of earnings in 1938; the improvement of 1939; and the further slight betterment of 1940, despite unfavorable conditions in the latter half of the year. For this year, additional improvement is seen, considering improving markets and record demand.



Annual Net Profits of 21 Oil Companies for 15 Years, 1926-1940

(After all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.)

YEAR	Atlantic Refining Company	Bishop Oil Company	Houston Oil Company	Lion Oil Refining Company	Margay Oil Corporation	Navarro Oil Company	Ohio Oil Company	Phillips Petroleum Company	Plymouth Oil Company	Pure Oil Company	Shell Union Oil Corporation
1926	$ 7,021,334	$ 3,545	$2,226,801	$1,181,278	$345,501	$ 63,927	$13,536,904	$21,407,708	$6,673,419	[3]$10,731,572	$31,518,965
1927	2,315,715	[1]81,097	2,429,331	450,975	765,782	[1]260,346	3,510,373	4,937,931	2,491,987	[3]4,710,585	11,344,914
1928	16,848,807	3,933	1,812,517	206,411	148,799	[1]272,461	5,054,956	5,960,171	2,077,862	[3]11,224,081	20,395,021
1929	17,332,417	510,385	1,731,469	1,184,478	206,765	[1]12,767	12,347,649	13,212,591	2,241,392	[3]6,539,521	17,573,249
1930	2,742,688	49,304	1,655,336	[1]647,108	[1]141,833	[1]53,497	10,930,015	3,040,630	2,187,907	[3]2,617,748	[1]5,095,574
1931	513,750	[1]128,161	[1]356,484	[1]728,879	[1]227,911	35,423	[1]21,488,763	[1]5,576,409	825,013	[3]470,178	[1]27,008,310
1932	3,918,021	8,092	[1]901,648	[1]385,098	[1]44,584	31,921	7,242,981	775,766	1,667,008	642,386	660,076
1933	6,556,377	75,071	[1]487,178	[1]221,543	[1]59,838	167,950	[1]130,016	1,500,695	47,598	811,086	[1]4,240,965
1934	5,512,105	149,857	281,146	12,652	85,906	216,778	5,411,924	5,757,309	670,261	[1]884,872	[1]949,111
1935	3,970,598	141,962	837,639	[1]53,455	93,578	[1]270,798	5,488,268	13,421,703	736,057	[3]8,150,027	6,812,835
1936	7,342,197	178,019	500,441	594,735	177,588	291,090	7,881,571	17,875,489	1,739,682	7,658,372	[4]22,494,364
1937	9,935,045	320,481	1,443,456	945,334	489,043	[2]674,933	11,862,107	24,113,874	2,935,342	11,403,805	20,668,880
1938	4,310,913	46,481	1,304,735	912,482	342,416	[2]579,947	4,582,964	10,317,826	2,601,377	5,412,903	11,318,422
1939	5,023,282	309	1,010,530	652,362	228,352	[2]232,566	1,492,086	9,833,314	2,475,051	8,290,418	11,805,713
1940	6,219,355	24,367	870,557	456,873	153,089	[2]231,093	8,739,371	11,590,317	1,442,739	8,718,057	[5]15,600,000

YEAR	Skelly Oil Company	Standard Oil Company of Kentucky	Standard Oil Company of Ohio	Sun Oil Company	Superior Oil Corporation	The Texas Corporation	Texas Pacific Coal & Oil Company	Tide Water Associated Oil Company	Union Company of California	H. F. Wilcox Oil & Gas Company	Total 21 Companies, By Years
1926	$5,691,346	$7,309,568	$3,207,429	$3,358,900	$ 75,850	$36,043,330	$1,578,043	$ 9,885,908	$11,831,618	$1,053,485	$174,746,431
1927	1,438,228	4,492,008	2,335,042	2,791,057	[1]545,058	20,029,405	314,088	5,345,872	10,048,493	[6]300,575	79,165,860
1928	4,104,376	4,745,604	3,896,549	5,008,027	[1]662,152	45,073,879	201,793	14,132,542	11,101,935	[6]468,612	151,531,262
1929	5,786,490	6,652,992	4,202,384	8,242,492	826,261	48,318,072	787,286	14,000,688	15,019,636	[6]518,928	177,222,378
1930	1,916,871	5,253,182	3,724,325	7,745,484	[1]1,684,369	15,073,303	[1]970,272	8,750,914	9,604,997	602,796	67,302,847
1931	[1]2,117,110	3,332,183	2,359,173	3,107,147	[1]1,864,364	[1]9,954,478	[1]1,413,236	[1]5,818,671	3,054,913	[1]1,069,783	[1]64,054,779
1932	[1]674,507	2,593,981	[1]1,206,361	4,198,046	9,436	[1]2,161,841	160,227	4,718,694	3,211,084	[1]399,066	24,064,614
1933	[1]820,534	2,458,045	[1]823,357	6,971,844	[1]327,344	[1]491,003	[1]556,583	7,265,301	1,954,279	[1]479,486	19,170,399
1934	713,577	2,599,466	[1]1,913,735	6,650,464	274,019	5,545,205	[1]248,270	5,810,657	2,902,733	[1]416,164	38,181,907
1935	2,585,849	2,197,809	2,690,647	7,100,238	244,624	17,065,037	23,640	7,865,701	5,038,286	[1]258,495	83,881,750
1936	4,850,315	3,793,451	4,194,314	7,563,554	147,895	38,260,341	642,330	10,217,928	6,133,398	18,579	142,555,653
1937	6,488,346	4,182,900	3,362,960	9,544,085	446,246	54,574,319	983,303	15,801,383	12,061,332	127,283	192,364,457
1938	2,650,059	3,779,706	1,964,605	3,085,119	332,579	23,139,030	1,035,599	10,427,273	6,862,758	254,057	95,261,251
1939	2,360,783	3,979,562	5,602,499	6,959,677	61,548	32,886,807	889,238	8,958,971	5,846,240	361,261	108,950,569
1940	3,316,678	3,818,408	6,209,008	7,969,068	152,225	31,547,662	479,815	9,550,000	4,606,789	165,035	121,860,506

[1] Loss. [2] Before federal income taxes. [3] Fiscal year including final 9 months of indicated calendar year and first 3 months of succeeding year; thus profit of $470,178 shown for 1931 actually represents results for fiscal year ended March 31, 1932, etc. First annual report conforming with calendar was that for 1932. [4] Including non-recurring profit of $2,829,504 from sale of an investment. [5] Estimated. [6] Before Federal taxes.

of course, earnings will be affected not only by the trend of prices but also by the promised larger volumes of business for this year.

It has been conservatively forecast that the domestic demand for all oils will be about 8 percent larger in 1941 than in 1940, an increase of a little over 100,000,000 barrels for the year; although it has been conceded that further loss of export business might reduce the net gain in total demand to 6 percent, or about 87,000,000 barrels in 1941 over 1940. Moreover, statistics and developments of the past few months have made these forecasts appear very conservative, as domestic demand has been better than expected, while the lease-lend program may result in larger exports than anticipated.

Improvement Factors

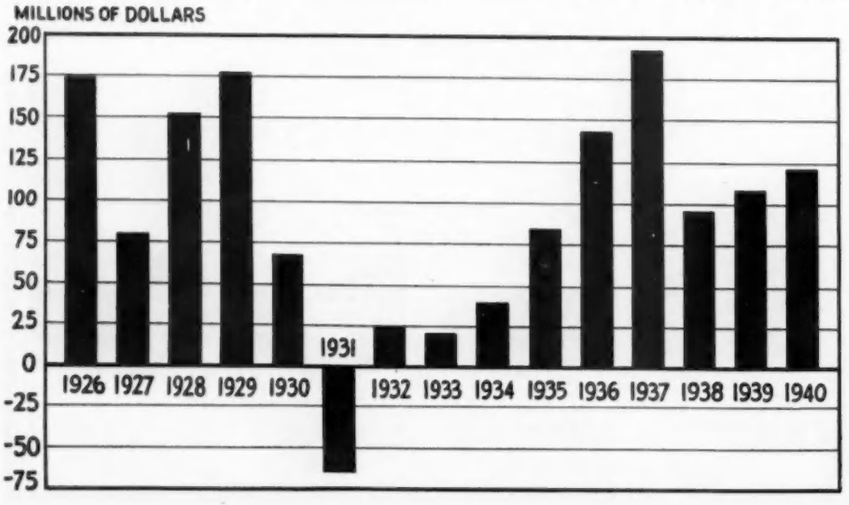
Improvement of the industry's markets since the beginning of this year has been based on the slow but steady betterment of the statistical situation, through benefit of increased demand and better balancing of supply with demand. Whereas gasoline stocks were seriously excessive at the beginning of spring last year, they gradually have been brought into much more favorable relation to prevailing consumption, with refiners holding down yields of that product and with demand stimulated by the defense program and resultant broader buying power of the public. In terms of days' supply at prevailing rates of consumption, therefore, gasoline stocks currently are considerably smaller than at this time last year, being about the same as they were two years ago. (See chart in April 7 issue, page 14.)

Aviation-grade gasoline stocks are about 2,000,000 barrels larger than at this time last year, at approximately 6,500,000 barrels. But the increase is welcomed for defense purposes.

Stocks of ordinary gasoline, however, are about 5,500,000 barrels, or 5½ percent, smaller than a year ago, at approximately 93,000,000 barrels; and this decrease indicates noteworthy betterment of the gasoline situation when considered in conjunction with the

Oil Company Earnings Comparatively Good in 1940

Profits of 21 oil companies for 1940 are 12 percent better than those of 1939, and 28 percent larger than 1938, which were exactly "average" for the 15 years, 1926-1940.



fact that domestic demand is up more than 10 percent from a year ago, while exports are running about the same as at this time last year.

The recent advance of crude oil prices reflected particularly the naturally declining production of crude in Illinois and Michigan and indications that Oklahoma is producing virtually at capacity. Those situations have forced refiners of the Middle West to fall back on Texas and other producing areas of the Mid-Continent for crude supplies, and markets in the latter districts have strengthened to such an extent that higher prices have been posted. It is indicated, moreover, that the recent moderate increase, averaging about 5 cents a barrel, may be followed within a few months by a further advance, particularly if the gasoline market continues to improve.

California's markets have conformed generally with those of the remainder of the country, product prices having weakened before the middle of 1940 and being still depressed, although now slightly improving. Crude oil prices were unchanged throughout 1940, but were revised February 1, 1941, lower gravity crudes having been increased an average of about 5 cents a barrel, although higher gravity oils were reduced about 10 cents a barrel on the average. Although the revision unfavorably affected producers of light crudes, it benefited refiners by providing a wider margin between raw material cost and realized price for gasoline.

Financial statements covering 1940 and preliminary information on results in the first quarter of 1941 reflect the above discussed market conditions, and also the various special situations of indivual companies or groups of companies.

The industry as a whole apparently earned somewhere around 10 percent more profit in 1940 than in 1939. More exact information is not yet available, as several of the larger companies, with far-flung operations, have not yet reported their results. As shown in an accompanying table, 51 oil companies, constituting a large part of the industry, earned in the aggregate 6.1 percent more in 1940 than in 1939.

Prominent among the companies that had average or better-than-average gains in earnings in 1940 were those that operate primarily or largely in the interior of the country, as gasoline prices held up better in that region than on the East, Gulf or West Coasts.

Although figures are not yet available on earnings in the first quarter of 1941, it is evident that results generally were much less favorable than in the initial quarter of 1940, which was exceptionally profitable, the markets having remained steady in that period before becoming seriously depressed shortly thereafter. As in the case of results for the full year 1940, the earnings for the first quarter of 1941 were relatively better for companies operating in the interior of the country, where gasoline prices did not become so seriously depressed. Concerns that fared particularly well, therefore, included Phillips Petroleum Company, and Skelly Oil Company, for example, which are indicated to have earned about as much first quarter profit this year as they did last year. And in contrast, companies with extensive operations on the East Coast and on the Pacific Coast, with gasoline prices depressed, naturally made comparatively poor showings for the first three months of 1941, measured against their exceptionally good results in the corresponding months of 1940.

Aggregate Profit of 50 Oil Companies 6 Percent Larger in 1940 Than in 1939

Net profits, after all deductions, including interest, depreciation, depletion, amortization, federal taxes, minority interest, etc.

COMPANY	1937	1938	1939	1940	Percent Change 1939-1940
First Group—					
Argo Oil Co.	$ 379,390	$ 391,388	$ 59,068	$ 137,658	+ 133.1
Atlantic Refining Co.	9,935,045	4,310,913	5,023,282	6,219,355	+ 23.8
Bishop Oil Co.	320,481	46,481	309	24,367	+ 98.7
Buckeye Pipe Line Co.	803,670	471,995	626,092	1,017,216	+ 62.5
Cities Service Co. & Subsidiaries	9,615,714	5,814,515	6,588,742	9,928,029	+ 50.7
Continental Oil Co.	13,948,460	5,139,655	6,304,504	4,317,658	— 31.5
Derby Oil & Refining Corp.	426,823	164,358*	21,248*	105,890	.....
Fohs Oil Co.	1,476,458	777,683	349,600	9,785*	.....
Houston Oil Co.	1,443,456	1,304,735	1,010,530	870,557	— 13.8
Indiana Pipe Line Co.	309,039	141,854	99,432	26,484	— 73.4
Lion Oil Refining Co.	945,334	912,482	652,362	456,873	— 30.0
Margay Oil Corp.	489,043	342,416	228,352	153,089	— 33.0
Midwest Oil Co.	944,545	931,623	990,281	882,293	— 10.9
National Transit Co.‡	604,985§	447,650	463,624	545,703	+ 17.7
Navarro Oil Co.	674,933†	579,947†	232,566†	231,093†	— 0.6
Ohio Oil Co.	11,862,107	4,582,964	1,492,086	8,739,371	+ 485.7
Pacific Western Oil Corp.	1,388,710	1,217,378	813,689	212,986	— 73.8
Pan American Pet. & Transport Co.	5,539,384	363,275	5,188,825	5,626,083	+ 8.4
Panhandle Prod. & Refg. Co.	212,050	53,933	9,536	31,369*	.....
Phillips Pet. Co.	24,113,874	10,317,826	9,833,314	11,590,317	+ 17.9
Plymouth Oil Co.	2,935,342	2,601,377	2,475,051	1,442,739	— 41.7
Pure Oil Co.	11,403,805	5,412,903	8,290,418	8,718,057	+ 5.2
Quaker State Oil Refg. Corp.	1,041,848	527,610	1,604,694	385,532	— 76.0
Reiter-Foster Oil Corp.	36,796*	20,040*	8,550*	644*	— ⧗92.5
Root Pet. Co.	9,504*	104,759*	283,127	60,702	— 78.6
Ryan Consolidated Pet. Corp.	138,463	84,775	48,498	127,419	+ 162.7
Seaboard Oil Co. of Delaware	2,447,130	1,895,790	1,746,464	1,300,993	— 25.6
Shell Union Oil Corp.	20,668,880	11,318,422	11,805,713	15,600,000‡	+ 32.1
Skelly Oil Co.	6,488,346	2,650,059	2,360,783	3,316,678	+ 40.5
Standard Oil Co. of Indiana	55,950,784	27,771,976	34,142,642	33,597,342	— 1.6
Standard Oil Co. of Kentucky	4,182,900	3,779,706	3,979,562	3,818,408	— 4.0
Standard Oil Co. of Ohio	3,362,960	1,964,605	5,602,499	6,209,008	+ 10.8
Sun Oil Co.	9,544,085	3,085,119	6,959,677	7,969,068	+ 14.5
Sunray Oil Corp.	950,850	569,314	605,552	527,910	— 12.8
Superior Oil Corp.	446,246	332,579	61,548	152,225	+ 236.7
The Texas Corp.	54,574,319	23,139,030	32,886,807	31,547,662	— 4.1
Texas Pacific Coal & Oil Co.	983,303	1,035,599	889,238	479,815	— 46.0
Tide Water Associated Oil Co.	15,801,383	10,427,273	8,958,971	9,550,000	+ 6.6
Union Oil Co. of California	12,061,332	6,862,758	5,846,240	4,606,789	— 21.2
Universal Consolidated Oil Co.	40,578	350,657	513,393	228,190	— 55.6
Woodley Petroleum Co.	215,590	90,629	119,181	140,689	+ 18.0
H. F. Wilcox Oil & Gas Co.	127,283	254,057	361,261	165,035	— 54.3
Total 42 Companies	288,752,628	142,223,312	169,477,715	180,987,485	+ 6.8
Second Group—					
Ashland Oil & Refining Co.	.....	.....	746,890	696,938	— 6.7
Kirby Petroleum Co.	.....	.....	30,494	80,229	+ 163.1
Maracaibo Oil Exploration Corp.	.....	.....	11,131	13,950	+ 25.3
Midland Oil Corp.	.....	.....	21,068	19,292	— 8.4
National Refining Co.	.....	.....	68,887	227,804*	.....
Panhandle Eastern Pipe Line Co.	.....	.....	4,363,399	4,548,324	+ 4.2
Transwestern Oil Co.	.....	.....	1,064,595*	439,149*	— ⧗58.7
Union Tank Car Company	.....	.....	2,410,666	2,446,316	+ 1.5
Wellington Oil Co. of Delaware	.....	.....	66,085*	949	.....
Total 9 Companies	.....	.....	6,521,855	7,139,045	+ 9.4
Total 51 Companies	.....	.....	175,999,570	188,126,530	+ 6.1

* Loss. † Before federal income tax. ‡ Estimated. § Includes non-recurring income of $105,293. ‡ Does not include operations of subsidiary, National Transit Pump & Machine Co. ⧗ Decrease in amount of loss.

A portion of the staff of 125 workers engaged in assembling and plotting Texas well logs. The project is expected to require about two years to complete.

Many Benefits Expected From Texas Well Logging Project

By ROBERT H. CUYLER
Associate Professor, Department of Geology, The University of Texas

LOGS of approximately 120,000 Texas oil wells are being collected and placed in a permanent file. The project, now well under way, is sponsored jointly by the W. P. A. and the University of Texas.

Many and varied are the results and benefits expected to result from the project's operation. It should prove of advantage to the oil industry, Texas, the United States, and to University students. It is conceivable, in addition to supplying many minds with food for thought, aiding students engaged in research, providing a permanent file for the state's wealth of information accumulated through the expenditure of many millions of dollars and providing both commercial and academic geological worlds with much basic research, that some new field of industry may result which could benefit the people and industrial field of Texas. With many fresh minds at work, who can predict what ideas may be developed as a result of a study of these data? At the very least, advances in scientific geological research as a benefit to all, can be expected.

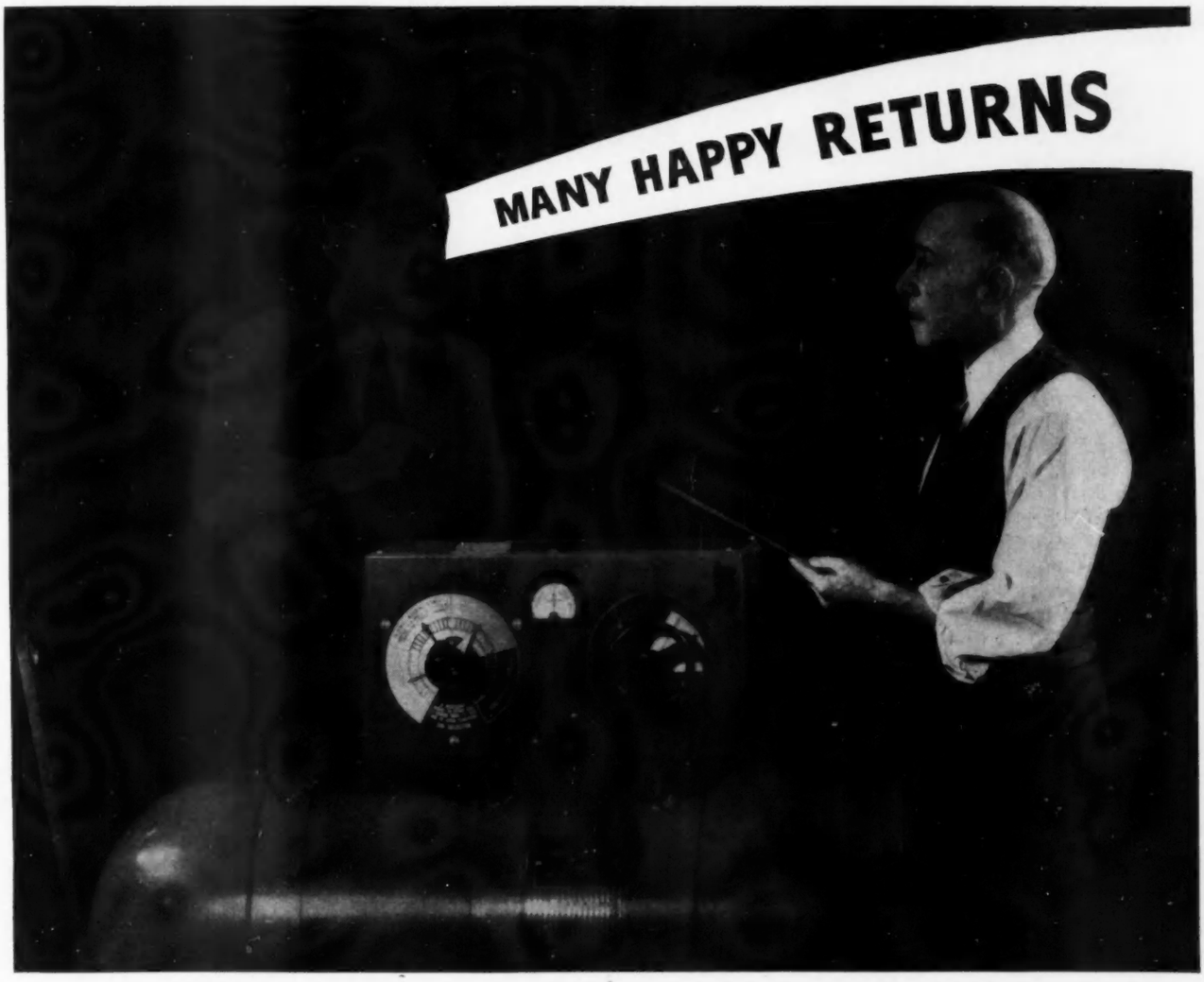
In addition to its help in the oil industry, it may prove beneficial in other ways. In the Houston area, for example, new industrial developments are rapidly using water which for millions of years has been stored by nature, and it is entirely possible that this problem may some day be alleviated by research work made possible by the usefulness of these data.

For a number of years, the Department of Geology of The University of Texas has been faced with a serious problem which has become more acute with the passage of time. This problem has been the lack of sufficient subsurface information with which students, especially graduate students, and members of the faculty could use in research work. It has long been realized by geologists that while men engaged in commercial work have at their disposal sufficient data with which to do the necessary basic research that they are necessarily handicapped by lack of time; however, students and faculty members have sufficient time but are handicapped by the lack of these necessary and essential data. With graduate enrollment increasing annually and with the trend to petroleum geology, especially subsurface, and more recently with sedimentation problems becoming more pronounced, it has become a major task to find suitable problems for those advanced students who wish to do research in subsurface geology or stratigraphy. These problems are available and in large numbers, but those on which there are sufficient data are very scarce and it is virtually impossible for a student to work a problem without spending months assembling the essential information. It is our hope that by eliminating this time spent in routine work it can be devoted more advantageously to intelligent thinking.

With this thought in mind, about a year ago the Work Projects Administration was approached with the hope of obtaining approval of a project to build a file of subsurface information at The University of Texas. This request was granted in the sum of $226,909 with the Work Projects Administration furnishing the funds for labor and The University of Texas, as sponsor, furnishing the funds for supplies.

The form in which the project, now known as the Well Logging Project, was approved is detailed below:

First, a card catalog is to be prepared which includes every well in Texas on which data are available. On each well an individual card is prepared on which the fol-



ALTER EGO: Literally "one's other self"—the still, small voice that questions, inspires and corrects our conscious action.

ALTER EGO: Don't you think mebbe we could relieve the production jam by replacing those old weld jaloppies with NEW welders?

Sure, but then we'd flop right back into a financial jam . . . don't let's spend money.

ALTER EGO: But AREN'T we spending? . . . aren't we spending in excessive welding costs for every welder that isn't of modern design?

Well, they do *claim the new Lincoln is faster.*

ALTER EGO: S'pose it boosts our speed 10%. That'll save us about $200 per year per welder.

Sounds good.

ALTER EGO: And s'pose we increase our speed not 10% but 20% or more—like some Lincoln users have—with Lincoln Welders PLUS Lincoln Service?

That would *be Many Happy Returns on our spending—and we'd be out of the jam in the bargain.* How *do we do it?*

• •

LINCOLN SUGGESTS: Ability to withstand the heavier loads is one reason the New "Shield-Arc" is *faster.* It permits use of larger electrodes. By stepping up electrode size from ¼" to $\frac{5}{16}$", one user increased welding speed 43%—cut cost 25c per pound deposited. What can *you* do? All "Shield-Arc" features are explained in Bulletin 412 (gratis).

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LINCOLN "SHIELD-ARC" WELDING

THE LINCOLN ELECTRIC COMPANY
Cleveland, Ohio

Largest Manufacturers of Arc Welding Equipment in the World

lowing information will be shown: company name, farm on which drilled, number of well, field, county, survey, ground or derrick floor elevation, location as to exact footage, date spudded, date completed, total depth, plugged-back depth, producing formation, top and thickness of producing formation, initial production, gravity, pressures, chokes, interval acidized and amount of acid used, interval perforated and number of holes, interval shot and amount, casing, liner and tubing record, formation tops and bases, paleontology, source of information and date, and remarks concerning any other information of interest in production, stratigraphic or structural work. Also information is recorded as to whether electrical, sample or drillers logs have been plotted, and whether samples are available in the University collection. The amount of information available on individual wells will vary greatly; very little being available on some wells while on others practically a complete record will be possible.

Second, a collection of electrical logs will be assembled.

Third, a collection of geochemical logs is being made.

Fourth, a collection of sample and paleontological logs including exact percentage logs furnished by geologists, companies, operators, and micropaleontologists.

Fifth, a collection of plotted drillers logs. It is realized that this type of information is the poorest available for scientific work but in some areas this type of information is the only kind obtainable and in those areas it will have considerable usefulness. This type of information will be plotted only where it will be of some use and where no other type of information is available.

Due to the generosity of operators, geologists and friends of The University, a large amount of information is now available and the supply is increasing daily. There are available to the project some 25,000 electrical logs ready for tracing, 120,000 driller's and several thousand of sample logs for plotting and many thousands of other logs including micropaleontological, microlithological and geochemical logs. Thus with the combination of this information, data on probably 120,000 wells are available on which cards may be prepared and one or more types of logs plotted.

Upon completion by counties this information is shipped to the University where it is filed in a permanent collection. The information after being placed in the permanent collection is available to research workers, students of geology and to the general public provided that the work is done in Austin. The logs and records will never be allowed to be removed from the library at The University. They cannot be reproduced for private or commercial enterprise nor will the information under any circumstances be for sale as it represents generous loans and is primarily intended for research work. This collection with the several millions of well samples now on file at The University, will represent an accumulation of subsurface information which will be invaluable in teaching and research work.

Actual work on the Well Logging Project commenced in Houston, on October 15, 1940, with a force of 25 workers. The work is under the direction of Mrs. M. O. Hills, Director of the Work Projects Administration for District 6. The sponsor is represented by the author, and actual project operation is under the direction of J. R. Jackson, a trained geologist, and a former member of the staff of the Department of Geology, The University of Texas. Since the opening date of the project the force has been augmented until a staff of 150 workers are engaged in assembling and plotting information.

Workers are grouped under the immediate direction of a foreman, the foreman having been promoted to that position from log plotting due to more than average ability. Each foreman is responsible for the supervision, quality and quantity of work turned out by his group. Of five operating groups, three are engaged in plotting logs, one in preparing cards and one in tracing electrical logs. Under each foreman is a checker who is responsible for checking very carefully and in detail each log or card, pointing out errors and rejecting work that is unsatisfactory. If a log or card does not come up to a set standard it is then rejected and another is made. Quality of work rather than quantity is stressed. In addition to this detailed checking, at intervals the supervisor spot checks the work as a means of further eliminating any errors which might creep in. When a log or card is accepted by the checker it is sent to a file clerk who files it in the proper position. Each log and card is filed by county, company, farm and number of well so that any well on which information is desired can be located quickly. For the permanent collection specially built log and card cabinets have been ordered which will furnish maximum efficiency and at the same time employ minimum space.

Although the project has been in operation only a few months a number of students have benefited greatly. To allow students to do research work all the logs have been plotted on a number of areas including the following: Strawn Basin, Fort Worth Syncline, Trinity Trend and the area covered by the Austin formation for an isopachous map. When the work is completed on these problems the information will be published and will be available to the general public in that form. Many varied fields of research will be covered by these problems and The University will welcome suggestions so that the students may be guided into doing that type of research which will benefit and interest the majority.

The project is expected to operate for approximateiy two years, employing an average of 125 workers over that period in order to compile and plot up all of the information which is and will be available.

The many companies, operators, geologists, and friends of the University who have so generously contributed their information are to be greatly commended on their foresight and interest in the advancement of scientific research. The benefits to the state and the University will be priceless and these benefits should be reflected in the quality of training of young geologists graduated by the University in the future. With the added training in actual problems which it will be now possible to give these students, they in turn, should by better service and better training repay the oil industry for its release of valuable information to the field of scientific research.

The author would like to take this opportunity to publicly express his most sincere and grateful thanks to those individuals and companies who have contributed and to express the hope that this project will prove to be as valuable as those who are closely connected with it believe it will be.

OIL WEEKLY EDITION

BAASH ROSS News

BAASH-ROSS TOOL COMPANY • LOS ANGELES • HOUSTON • NEW YORK

A MONTHLY BULLETIN COVERING NEWS OF EQUIPMENT AND OPERATIONS IN THE PETROLEUM INDUSTRY

SIX QUESTIONS TO ASK YOURSELF BEFORE YOUR NEXT FISHING JOB

Not All Jars Are Alike. This Guide May Help You in Selecting.

Rotary jars are meant for serious business.

When you run a jar in the hole, you're either already behind the eight ball... or you're expecting to be at any minute. In either case, you're staking your well on the unfailing dependability of that jar to operate *regardless of circumstances!*

With so much depending on the design and construction of the jar you use, ask yourself these questions BEFORE you use it...

1. Is the force of the blow *instantly* adjustable from the surface?

In the Baash-Ross Improved Kammerdiner Rotary Jar the blow is completely *torque-controlled.* The force of the blow can be instantly—and easily—*increased* or *decreased* from the surface to meet changing requirements. Moreover, the blow can be varied over narrow or wide limits—and *any* number of changes in adjustment can be made—without removing the jar from the hole.

2. Can the force of the blow be adjusted both *before* and *after* the blow is struck?

In the Baash-Ross Kammerdiner Jar the blow can be instantly adjusted at any time—both *before* and *after* the blow is struck. Should you accidentally increase the jarring force so far that you cannot operate the jar, you can instantly "let off" on the adjustment without having to complete the stroke... or without having to come out of the hole. *This is an important point to look for.*

3. Does the jar give you the greatest possible efficiency in loosening stuck objects?

In the Baash-Ross Kammerdiner Jar the two most effective lossening actions are combined—a jar upward coupled with a slight twist as the blow is struck. This added twist often marks the difference between loosening the fish and *not* loosening it.

4. Can you circulate through the jar at high pressure?

Adequate circulation is often an important aid to jarring operations... and is always necessary when using the jars with formation testing equipment. The Baash-Ross Kammerdiner Jar is so designed that full circulation can be maintained through it in either direction. Another point—the circulation wash-pipe stays *below* the box in *both* the tripped and set positions. That means any type of tool can be connected into the top of the jar without risk of damage or interference.

5. Can the jar be used at any depth and in any condition of hole?

If it's a Baash-Ross Kammerdiner, the answer is "Yes" in both cases. The unusually positive operating principle of this jar is unaffected by depth or condition of hole!

6. Is it fool-proof and *always* dependable?

The Baash-Ross Kammerdiner Jar has no springs, no delicate parts, no trick "gadgets" of any kind. It is the simplest, most positive jar available today... and is always dependable under *every* type of field condition!

For Safety's Sake, on your next jarring operation, be sure to specify a Baash-Ross Improved Kammerdiner. Available on a rental basis in the U. S. A.—sold for export only.

Have You Checked the Effective "Grip"?

Sockets and spears have one thing in common—essentially they are both "gripping" tools, and the amount of their effective gripping surface is an important measure of their operating efficiency.

So this point is worth remembering. *Both the Baash-Ross Rotary Releasing Spear and the Baash-Ross Rotary Releasing Socket are unequalled in the amount of slip surface with which they hold the fish.* Also, the slip area is more evenly distributed *around* the tool, without large gaps between the slips.

All this means a *better* grip for heavy jarring and pulling operations... and less danger of damaging or deforming the fish!

There are a lot of other outstanding advantages you get when using these tools and your Baash-Ross representative will be glad to go over them with you. Ask him about the way the spear-setting mechanism automatically disengages when the slips are set . . . and the advantages of this unique feature!

KEY SEATING

KEY SEATING is a trouble that appears to be on the increase as wells go deeper. While not exactly a "fishing" problem, it often leads directly into one. So the best cure for the fishing job is, of course, to prevent the key seat. Keeping the hole straight —1° deviation or less—has been found the best prevention. When a key-seat does develop, ream the hole—immediately—to full diameter at that point.

BAASH-ROSS

***WHENEVER PIPE BECOMES STUCK** off-bottom, don't attempt to pull it loose until you are sure how it's stuck. When pipe is stuck in a key-seat by sand or cavings, pulling up generally wedges the pipe only tighter... whereas working the pipe* downward *may release it.*

BAASH-ROSS

AND A USEFUL SAFETY TOOL to install in the string above the bit or reamer—in case they stick in the hole when pulling out —is the* Baash-Ross Bumper Sub. *It delivers an upward or downward blow simply by straight raising and lowering of the drill pipe. In addition, this sturdy tool is ideal for use with fishing tools that require downward blows for release!

BAASH-ROSS

EVEN AFTER THE PIPE is bumped down out of the key-seat, there is still the problem of pulling it out without sticking again. Try rotating the pipe rapidly as it is raised. If there is sufficient off-balance in the string, this may throw it out of the slot. Failing this, drop the string on bottom to kink it... then rotate rapidly while lifting. If you finally have to cut the pipe, cut it close to the bottom and completely ream out the key seat *before* fishing.

BAASH-ROSS

BAASH-ROSS INTERNAL DRILL PIPE CUTTERS have many advantages in recovering stuck drill pipe... they allow maximum recovery of the free portion of the pipe... enable circulation to be established for "washing down" to desired cutting depth... leave a clean top on pipe remaining in the hole, facilitating further fishing operations. This Cutter is available from Baash-Ross 24-hours a day in all major domestic fields.

Operators tell us...

that this is the safest Safety Joint they've ever used.

It's name - the Baash-Ross "Autolock" Safety Joint!

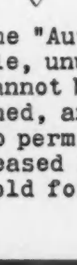
In addition to the normal driving direction...

You can also rotate it in a reverse direction (for operating releasing type fishing tools, etc.) without loosening it.

Yet it releases instantly at the will of the operator.

It's available in two types - "C" and "D" - which are identical in operation.

However, the lower half of the "D" type is made of drillable metal for use with drillable packers and other equipment.



After unscrewing from the "D" type, the portion of the joint left in the hole can be completely drilled up.

The "Autolock" is simple, unusually strong, cannot become overtightened, and is packed-off to permit circulation. Leased in the U. S. A. Sold for export only.

Improving Conditions Likely to Stimulate Drilling

DRILLING increased seasonally in March, average daily well completions having been higher than in February; and further seasonal expansion of field work was in prospect for April even before the general advance of crude oil prices, as indicated by the fact that more rigs were in operation on April 1 than on March 1. And the price raise, naturally, will tend to stimulate drilling.

It is indicated, moreover, that the moderate price increases of March 29-April 1, averaging about 5 or 6 cents a barrel, may be followed within a few months by further advances, especially if the gasoline market further improves. And this possibility, as well as the recent actual revisions, may be expected to encourage drilling.

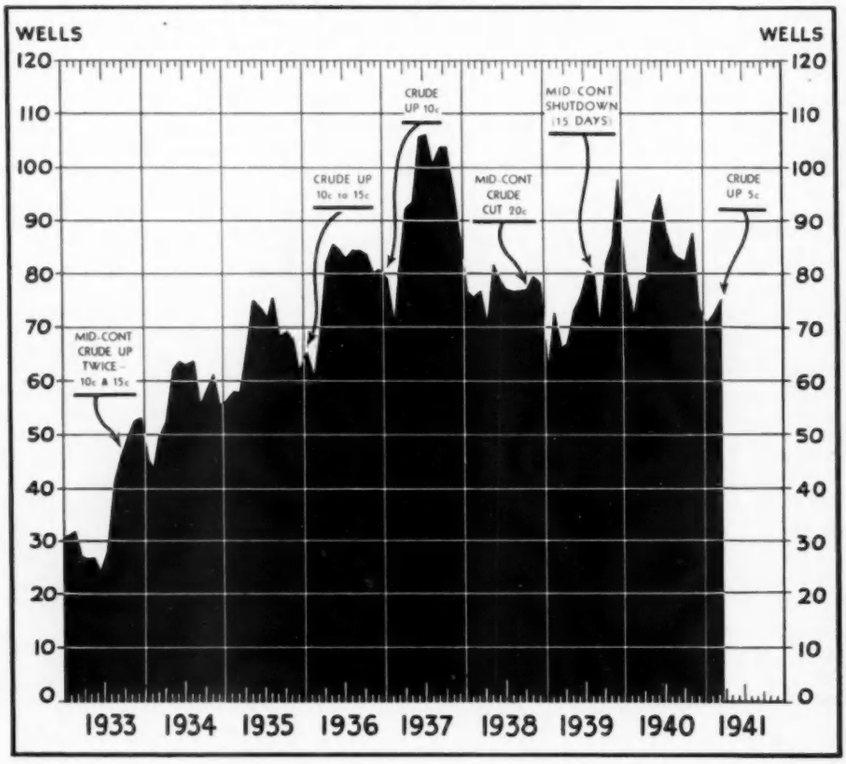
The improved crude market probably will hasten the drilling of some prospects besides stimulating development of established fields.

In this connection, some operators anticipate increases of allowables in the prorated states, being of the opinion that such increases will be necessary in meeting the market requirements as the large consuming season for gasoline proceeds in the spring and summer.

Gasoline demand so far this year

Average Daily Well Completions in U. S., by Months

(Latest monthly data subject to slight revision.)

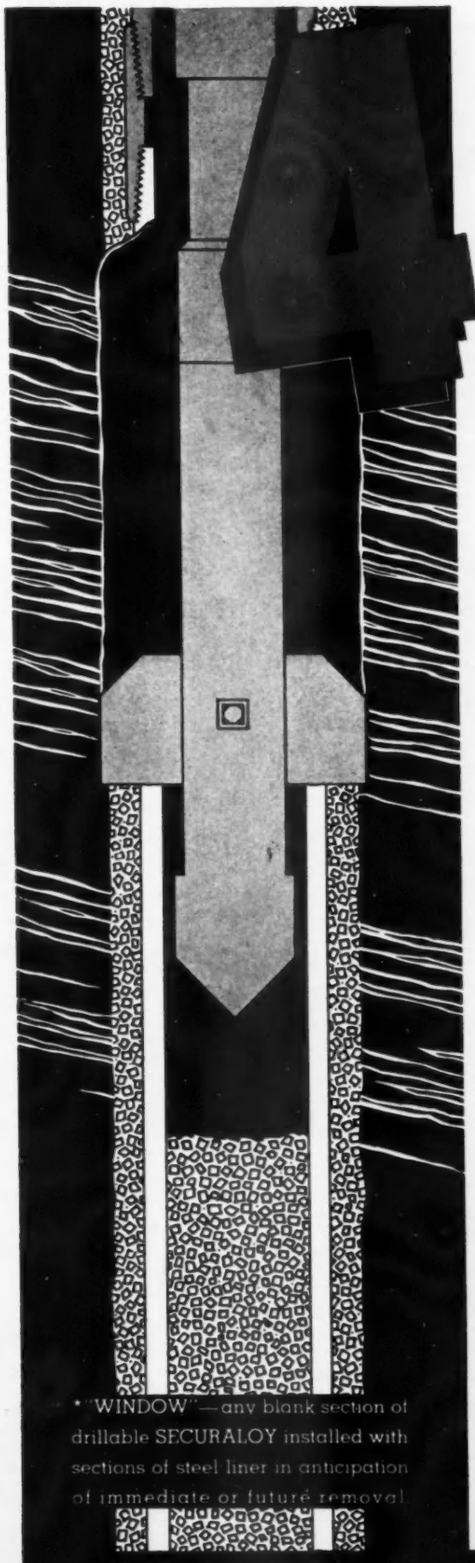


Miscellaneous Well Completions in the United States in 1941

(This tabulation gives detailed information on "miscellaneous" wells included in accompanying main table of all completions.)

STATE OR DISTRICT	MONTH OF MARCH								FIRST THREE MONTHS OF 1941							
	Total Miscellaneous	Old Wells Deepened					Water Input	Salt Water Disposal	Total Miscellaneous	Old Wells Deepened					Water Input	Salt Water Disposal
		Total	Oil	Gas	Dry	Initial Production				Total	Oil	Gas	Dry	Initial Production		
Colorado	1	1	..	..	1	....	....	....	1	1	..	..	1	....	....	....
Illinois	16	15	13	..	2	2,205	....	1	34	30	25	..	5	4,538	....	4
Indiana	2	1	..	..	1	....	....	1	11	8	7	..	1	517	*1	2
Kansas	11	6	6	..	..	6,686	....	5	29	24	19	..	5	25,695	....	5
Kentucky	1	1	..	..	1	....	....	....	2	2	1	..	1	8	....	....
Louisiana: North	....	..	..	..	..	....	....	....	1	1	..	..	1	....	....	....
New York: Allegany	21	..	..	..	..	....	21	....	68	..	..	..	..	....	68	....
Ohio	20	1	..	1	..	....	19	....	30	1	..	1	..	....	29	....
Oklahoma	24	21	13	..	8	1,978	*1	2	53	46	29	3	14	6,436	*4	3
Pennsylvania: Bradford	129	..	..	..	..	....	129	....	333	..	..	..	..	....	333	....
Texas	9	8	5	1	2	2,006	....	1	15	13	7	1	5	2,706	....	2
East Texas Field	1	..	..	..	..	....	....	1	2	..	..	..	..	....	....	2
East Texas	....	..	..	..	..	....	....	....	1	1	..	..	1	....	....	....
North Texas	2	2	1	..	1	51	....	....	3	3	1	..	2	51	....	....
South Texas	2	2	..	1	1	....	....	....	4	4	2	1	1	700	....	....
Corpus Christi	....	..	..	..	..	....	....	....	2	2	2	..	..	700	....	....
Laredo	2	2	..	1	1	....	....	....	2	2	..	1	1	....	....	....
West Texas	4	4	4	..	..	1,955	....	....	5	5	4	..	1	1,955	....	....
West Virginia	4	4	..	4	..	....	....	....	4	4	..	4	..	....	....	....
Wyoming	1	1	1	..	..	136	....	....	2	2	1	1	..	136	....	....
Total United States	239	59	38	6	15	13,020	170	10	583	132	89	10	33	40,036	435	16

* Gas input.



* "WINDOW"—any blank section of drillable SECURALOY installed with sections of steel liner in anticipation of immediate or future removal

SECURALOY WINDOW* APPLICATIONS with proven performance records!

SECURALOY Drillable Sections located as "windows" in the production string permit the most economical and complete development of all production zones. SECURALOY'S high strength and its ease of removal allow a wide range of "window" applications to be made, of which the following are typical examples:

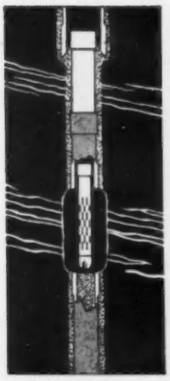
DIRECTIONAL DRILLING *Window* INSTALLATION

SECURALOY *Windows* used for top section of steel liner, make future deepening, future repairs, and directional drilling by whipstocking, less expensive and less hazardous. SECURALOY installations of this type ordinarily require only 50 to 80 feet of drillable pipe.

Send for Bulletin W-1 showing installation drawings and explanation of this application

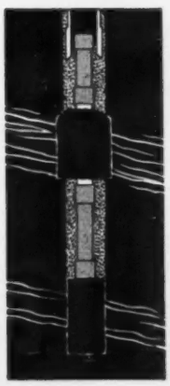
MULTIPLE-ZONE TYPE *Window* INSTALLATION

SECURALOY *Window* installed opposite production zone permits future development after lower zones become depleted. SECURALOY section is removed with wall-scraper economically . . quickly.



Send for Bulletin W-2 showing installation drawings and explanation of this application.

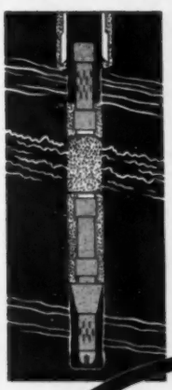
"ILLINOIS" TYPE OF *Window* INSTALLATION



SECURALOY *Windows* facilitate two-zone production in a single well After cementing a complete casing string in one operation, SECURALOY is removed by wall-scraper or explosives, exposing upper zone for production.

Send for Bulletin W-3 showing installation drawings and explanation of this application

'WATER SHUT-OFF' TYPE *Window* INSTALLATION



SECURALOY *Windows* installed opposite water sands situated between two oil zones permit effective plug-back of lower oil zone and intermediate water-producing zone so production from upper oil zone can be continued unimpaired.

Send for Bulletin W-4 showing installation drawings and explanation of this application.

See Your 1941 Composite Catalog or Drilling Equipment Directory for SECURALOY Pipe Sizes and SECURALOY Drillable Accessories.

SECURITY ENGINEERING CO., INC.

WHITTIER, CALIFORNIA, PHONE 42004

HOUSTON, TEXAS, PHONE CAPITOL 9538 • CENTRALIA, ILLINOIS, P.O. BOX 283

EXPORT: SECURITY ENGINEERING CO., INC., 420 LEXINGTON AVENUE, NEW YORK CITY

Sievers Reamers ★ Securaloy ★ Security Drillable Products

has materially exceeded early expectations, and if it continues abnormally large, requirements of crude oil will be up correspondingly.

Importantly instrumental in bringing about the recent crude-price advance was the continued natural decline of production in Illinois and Michigan, where operators have not succeeded in finding new fields to compensate for diminishing output of the established producing areas. This statement is attested by the fact that some buyers of Illinois crude, for processing in Middle Western refineries, were paying or offering premiums of 10 cents a barrel above posted prices, prior to the recent marking up of postings.

The situation was accentuated, moreover, by the fact that substitute sources of supply were not readily available in Oklahoma, because that state already was producing close to its potential output.

Refiners of the Middle West consequently have been forced to draw increasingly on fields of Texas and other areas of the Mid-Continent, and the competition for supplies finally led to the recent advance in crude postings in the Mid-Continent as well as in Illinois and Michigan.

Additional Drilling Rigs Put into Operation in March

STATE OR DISTRICT	TOTAL RIGS IN OPERATION (Drilling, Rigs Up, Shutdown)				DETAILS OF APRIL 1, 1941 FIELD ACTIVITY					
	Year Ago (April 1, 1940)	Month Ago (Mar. 1, 1941)	Now (April 1, 1941)	Percent Change from Year Ago	Rigs in Operation			Prelim. Activity		Total Operations
					Drilling	Rigs Up	Shutdown	Derricks	Locations	
Alabama	2	5	7	+ 250.0	3	1	3	....	....	7
Arizona	7	7	7	....	1	....	6	1	....	8
Arkansas	44	37	31	— 29.5	10	1	20	2	6	39
California	297	255	253	— 14.8	144	59	50	....	88	341
Colorado	30	32	29	— 3.3	7	3	19	....	....	29
Florida	4	2	2	— 50.0	....	....	2	....	....	2
Georgia	....	3	4	....	....	1	3	....	....	4
Illinois	442	308	302	— 31.7	233	38	31	14	13	329
Indiana	78	76	79	+ 1.3	31	7	41	....	20	99
Iowa	3	3	4	+ 33.3	3	....	1	....	1	5
Kansas	283	246	253	— 10.6	206	25	22	10	10	273
Kentucky	61	25	31	— 49.2	15	3	13	....	1	32
Louisiana	215	212	187	— 13.0	157	9	21	20	92	299
North Louisiana	60	74	67	+ 11.7	47	4	16	8	4	79
South Louisiana	155	138	120	— 22.6	110	5	5	12	88	220
Michigan	199	147	152	— 23.6	79	29	44	....	5	157
Mississippi	38	35	31	— 18.4	16	5	10	5	6	42
Missouri	18	14	15	— 16.7	3	1	11	....	1	16
Montana	34	66	44	+ 29.4	14	....	30	1	2	47
Nebraska	14	28	27	+ 92.9	13	4	10	3	2	32
New Mexico	163	99	100	— 38.7	63	5	32	....	17	117
New York	120	35	63	— 47.5	46	7	10	4	11	78
Ohio	191	271	267	+ 40.0	194	27	46	18	45	330
Oklahoma	372	331	346	— 7.0	246	55	45	41	29	416
Oregon	1	2	2	+ 100.0	1	....	1	....	....	2
Pennsylvania	393	330	372	— 5.3	269	38	65	26	66	464
South Dakota	1	....	....	....	....	....	....	....	....	....
Tennessee	3	11	8	+ 166.7	5	1	2	....	....	8
Texas	1,261	1,144	1,266	+ 0.4	974	92	200	82	532	1,880
East Texas Field	15	28	21	+ 40.0	13	3	5	10	16	47
East Texas Border Counties	10	16	16	+ 60.0	7	3	6	1	2	19
Rest of East Texas	42	51	68	+ 61.9	46	4	18	8	10	86
North Texas	231	195	199	— 13.9	158	14	27	6	111	316
South Texas	307	304	308	+ 0.3	247	28	33	30	151	489
Corpus Christi Area	158	176	179	+ 13.3	151	18	10	15	78	272
Laredo Area	84	76	76	— 9.5	60	5	11	10	43	129
San Antonio Area	65	52	53	— 18.5	36	5	12	5	30	88
Texas Gulf Coast	143	77	128	— 10.5	99	9	20	10	83	221
Texas Panhandle	104	87	97	— 6.7	73	14	10	7	15	119
West Texas	298	296	334	+ 12.1	270	14	50	10	132	476
West Central Texas	111	90	95	— 14.4	61	3	31	....	12	107
Utah	3	4	4	+ 33.3	2	....	2	....	....	4
West Virginia	126	165	176	+ 40.0	125	20	31	12	29	217
Wyoming	69	59	59	— 14.5	26	3	30	....	3	62
Total United States	4,472	3,952	4,121	— 7.8	2,886	434	801	239	979	5,339

Completions in First Three Months Only 5.4 Percent Fewer This Year Than Last Year

STATE OR DISTRICT	MONTHLY COMPLETIONS								CUMULATIVE COMPLETIONS—First 3 Months							
	Total			Details for [1]March, 1941					Total			Details for First 3 Months of 1941				
	[2]Year Ago (March, 1940)	[3]Month Ago (February, 1941)	[1]Latest Data (March, 1941)	New Wells Drilled for Oil and Gas			[8] Miscellaneous	Initial Oil Production	[4]1940	[5]1941	Percent Change	New Wells Drilled for Oil and Gas			[8] Miscellaneous	Initial Oil Production
				Oil	Gas	Dry						Oil	Gas	Dry		
Arkansas	15	8	12	8	....	4	....	2,379	45	34	— 24.4	18	....	16	....	3,919
California[6]	80	88	102	95	....	7	....	68,887	255	300	+ 17.6	239	2	59	....	195,267
Colorado	....	....	3	1	1	....	1	15	2	3	+ 50.0	1	1	....	1	15
Illinois	263	193	309	210	2	81	16	47,673	808	741	— 8.3	519	3	185	34	112,758
Indiana	21	35	43	24	3	14	2	2,832	86	113	+ 31.4	59	9	34	11	8,141
Kansas	118	138	180	124	5	40	11	199,575	353	457	+ 29.5	302	12	114	29	462,274
Kentucky	11	28	10	2	....	7	1	62	52	57	+ 9.6	18	1	36	2	1,433
Louisiana	102	111	114	83	5	26	....	17,773	341	324	— 49.9	215	22	86	1	47,875
North Louisiana	46	48	40	27	3	10	....	3,240	121	126	+ 4.1	75	16	34	1	10,575
South Louisiana	56	63	74	56	2	16	....	14,533	220	198	— 10.0	140	6	52	....	37,300
Michigan	94	61	75	21	5	49	....	7,395	316	190	— 40.0	71	9	110	....	14,902
Mississippi	10	11	16	13	1	2	....	7,131	34	38	+ 11.8	28	1	9	....	16,271
Missouri	7	6	5	....	1	4	....	....	21	16	— 23.8	....	4	12	....	....
Montana	2	18	22	8	10	4	....	1,808	27	48	+ 77.8	28	15	5	....	5,552
Nebraska	....	6	4	1	1	2	....	461	....	22	....	7	1	14	....	2,109
New Mexico	54	30	33	24	2	7	....	3,851	184	84	— 54.3	63	5	16	....	16,972
New York	89	52	63	41	1	....	21	254	262	158	— 40.0	88	2	....	68	537
Ohio	57	115	136	22	73	21	20	764	212	356	+ 67.9	69	175	82	30	1,863
Oklahoma	154	109	179	89	21	45	24	34,200	481	451	— 6.2	238	37	123	53	87,330
Pennsylvania[7]	273	266	424	166	97	32	129	205	936	935	— 0.1	389	161	52	333	545
South Dakota	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Tennessee	2	2	1	....	....	1	....	....	9	4	— 55.6	....	....	4	....	....
Texas	808	688	854	612	21	212	9	399,881	2,424	2,135	— 11.9	1,551	54	515	15	992,783
East Texas Field	21	63	65	61	....	3	1	147,300	75	179	+138.7	173	....	4	2	337,734
East Texas Border	....	1	3	....	3	....	....	....	3	4	+ 33.3	....	4	....	....	21,117
Rest of East Texas	27	30	26	17	3	6	....	5,903	58	78	+ 34.5	40	7	30	1	17,797
North Texas	180	164	201	116	1	82	2	36,256	534	489	— 8.4	307	2	177	3	108,536
South Texas	203	164	205	140	4	59	2	56,949	629	524	— 16.7	339	15	166	4	134,189
Corpus Christi	85	83	107	88	1	18	....	45,132	280	272	— 2.9	208	6	56	2	109,499
Laredo	100	58	82	41	3	36	2	10,436	296	189	— 36.1	94	9	84	2	20,504
San Antonio	18	23	16	11	....	5	....	1,381	53	63	+ 18.9	37	....	26	....	4,186
Texas Gulf Coast	89	44	71	50	4	17	....	12,811	293	169	— 42.3	128	12	29	....	36,223
Texas Panhandle	49	42	46	41	3	2	....	10,419	138	120	— 13.0	110	4	6	....	25,035
West Texas	171	128	183	166	....	13	4	127,694	508	430	— 15.4	395	2	28	5	322,586
West Central Texas	68	52	54	21	3	30	....	2,549	186	142	— 23.7	59	8	75	....	10,683
West Virginia	34	48	56	7	35	10	4	32	146	164	+ 12.3	16	113	31	4	132
Wyoming	9	8	10	8	....	1	1	7,014	36	22	— 48.9	16	....	4	2	7,042
Total United States	2,203	2,021	2,651	1,559	284	569	239	802,192	7,031	6,652	— 5.4	3,935	627	1,507	583	1,977,720

[1] Wells completed in 5 weeks, or 35 days ended March 31, 1941. [2] Wells completed in 4 weeks, or 28 days, ended March 25, 1940. [3] Wells completed in 4 weeks, or 28 days, ended February 22, 1941. [4] Wells completed in 13 weeks, ended March 25, 1940. [5] Wells completed in 13 weeks, ended March 31, 1941. [6] California figures are from American Petroleum Institute except for March, 1941. [7] Bradford, Pennsylvania, figures are from The Producers Monthly, except for March, 1941. [8] Details appear in accompanying table.

An open letter

to the Brass Hats
of 2700 Oil Companies

There's an old saying that it's sometimes possible to get so close to the forest you can't see the trees. This is true of operations even in a small company like ours, and possibly also applies to larger corporations in the oil business. The purchase of heavy oil field equipment, involving initial expenditure running into many thousand dollars, receives the attention and consideration of key men in the company. On the other hand, the purchase of smaller items, such as a plunger pump or a string of sucker rods, doesn't always receive the consideration or attention which we believe this purchase merits.

If every oil company takes its total yearly bill for deep well plunger pumps and sucker rods and adds to it the amount of extra production that is obtained by quality pumping equipment it will appreciate that here is an expense item of no mean proportions. We know of one oil company which during 1941 plans to spend approximately $140,000 for deep well plunger pumps and sucker rods. Purchases that reach a figure such as this rightfully deserve consideration of top executives.

It is at this point that Axelson Pumps and Sucker Rods enter the picture. If you want to pump the greatest quantity of oil at the lowest cost per barrel you will install Axelson Pumps and Sucker Rods. They are not always the cheapest, if you consider initial cost, but they are the most economical day in and day out, under favorable and unfavorable conditions, both from the standpoint of lowest long run cost and increased production. Check up today on what your pump and rod bill was during 1940. Then you'll appreciate why we say this is a purchase which justifies the consideration of top men in every oil company.

AXELSON SELLS AND *SERVICES* DEEP WELL PLUNGER PUMPS & SUCKER RODS

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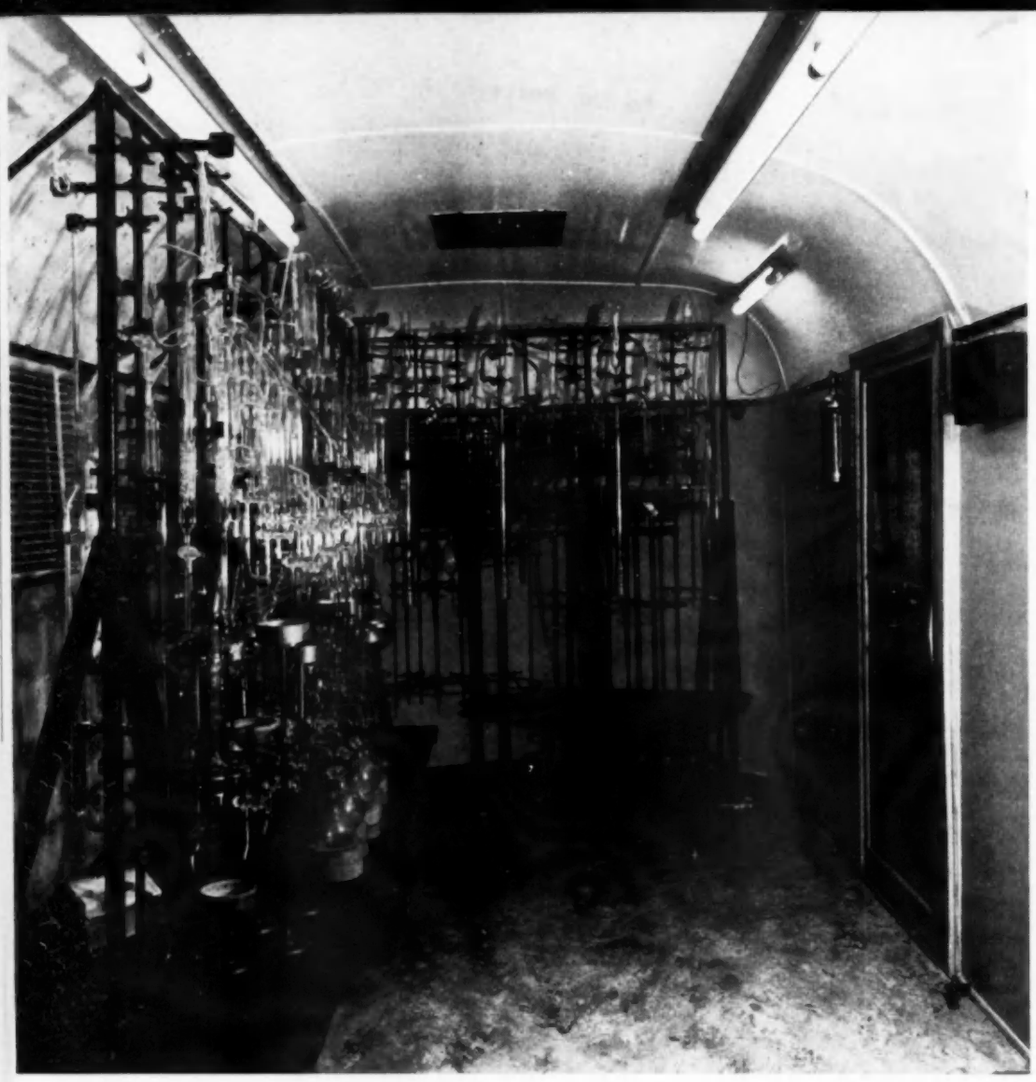


Interior of geochemical logging trailer, where analyses of formation hydrocarbons are made at the well site.

New Advances Broaden Use of Geochemical Prospecting

UP until about 25 years ago, visual surface evidence, in the form of oil and gas occurrences or seepages, was responsible for the discovery of most oil fields. As such prospects became scarce, this direct prospecting method was supplemented by geological speculation, which in turn gave way to rational structural geology, and then to geophysics or a combination of these sciences. Of necessity, the earlier visual prospecting method was relegated to the status of an implement that could be employed only upon occasional lucky chances that became fewer and fewer with the years.

Now, after years of inactive and non-use, at least in the United States, the earliest of all prospecting methods, the old direct technique of searching for surface accumulations without regard to structure, is experiencing a renaissance under the high-sounding name of microscopic geochemical prospecting. Although basically, geochemical prospecting still is the deduction of petroleum accumulations by location of oil and gas emissions, the human eye no longer is the determining factor in finding their existence. Modern methods have as their basis the quantitative measurement of micro-volumes of gas and oil and mineralization phenomena that cannot be detected visually. During the past few years sufficient data have been obtained by geochemical work to verify the frequent occurrence of microscopic leakage around underground oil and gas accumulations. Even in this day of highly scientific exploration, geochemical prospecting is expected to play an important role in future oil and gas finding, perhaps especially in the search for marginally low-relief structures and stratigraphic traps that will be sought more and more as structural prospects are drilled.

Geochemical manifestations of a petroleum accumulation fall into two broad classes, namely: the near-surface effects, and the near-deposit effects. Near-surface phenomena, the investigation of which commonly is called soil analysis, are two dimensional, yielding information on the areal extent and position of the accumulation, but

For Complete Information on the PUMPING UNITS SERVICING WINCHES DRAWWORKS, ETC.

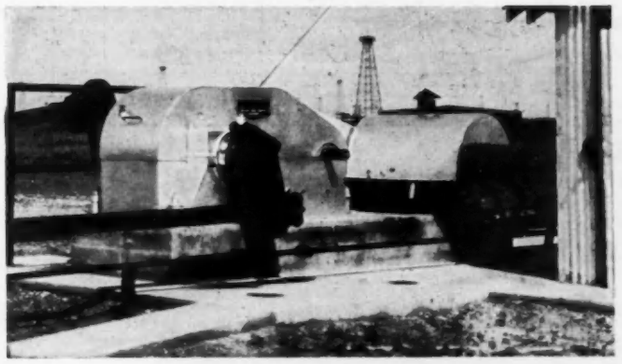
OCS

OCS BAT PUMPER

See Fig. A-119, Page 1860, Composite Catalog
OCS No. 10 Polly in Eastern Oklahoma

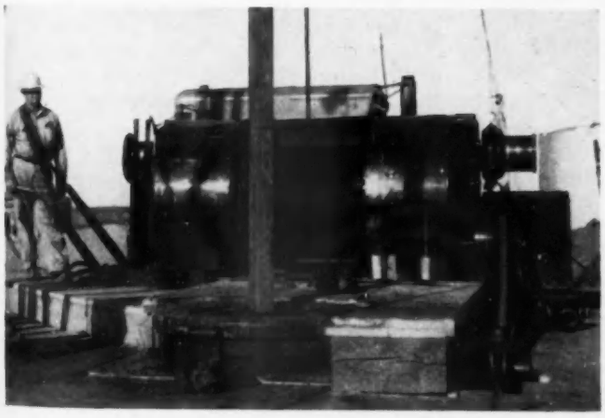
See the OCS Section 1941 COMPOSITE CATALOG

OCS POLLY PUMPER
(DOUBLE REDUCER)



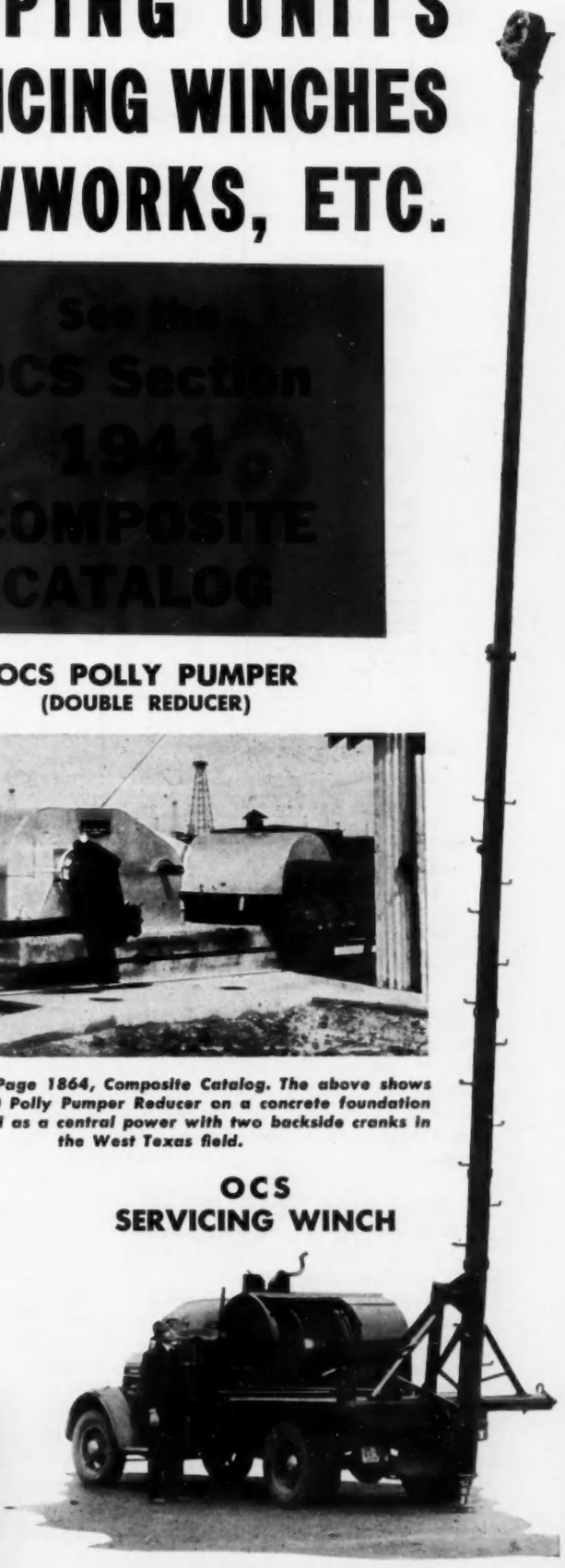
See Fig. 226, Page 1864, Composite Catalog. The above shows an OCS No. 40 Polly Pumper Reducer on a concrete foundation and being used as a central power with two backside cranks in the West Texas field.

OCS STREAMLINED DRAWWORKS



See Fig. A-147-1, Page 1867, Composite Catalog
Front View OCS Streamlined Drawworks on 4000 Ft. Well in Texas

OCS SERVICING WINCH



OCS Servicing Winch with Mast Raised
See Page 1874, Composite Catalog

THE OIL CITY SUPPLY CO.
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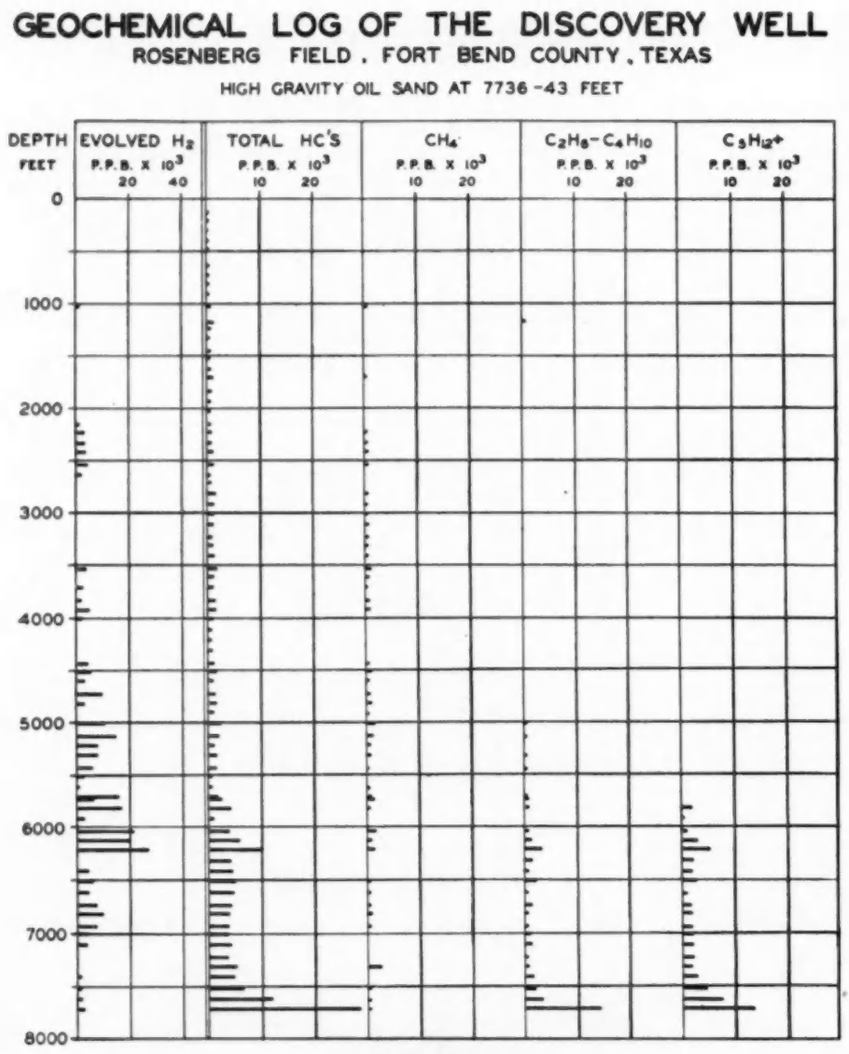

FIGURE 1

giving no perception of depth. Near-deposit phenomena, revealed by the more recently introduced geochemical well logging, permit reasonable advance estimates of approach to an accumulation, but, as the sampling density in the horizontal plane is necessarily the well density, do not permit the detailed areal deductions possible in soil-analysis work.

Geochemical Well Logging

A new development in geochemical prospecting, that supplements and substantiates surface data and broadens its field of application, is geochemical well logging. This type of "down-the-hole" soil analysis makes it possible to estimate the depth ahead to an oil reservoir, as well as detect the presence of oil or gas. Progress has been made to such an extent that the possibility of accumulation can be estimated for 500 to 1000 feet of undrilled sediment beneath the bit. Also, since there is a lateral dissemination of the hydrocarbons escaping from an accumulation, the possibility of a reservoir at some distance removed can be estimated from the log of a dry abandoned well.

Geochemical well logs are made from analyses of cuttings taken during routine drilling and from cores. Cuttings are analyzed for hydrocarbons and various inorganic constituents. Generally samples are taken for about every 30 feet of drilling, washed, placed in jars, and conveyed to the laboratory, which may be a trailer on location. Here composite samples to represent up to each 90 feet of drilling are made up.

The laboratory technique, as described by Horvitz[1] is as follows:

Using a small portion of the sample, the moisture content is determined. About 100 grams, calculated on a dry basis, are placed in a flask and attached to the extraction unit. The analysis of the extracted gases involves the combination of low-pressure, low-temperature fractionation, and combustion methods. The routine analysis involves the separation of the gas sample into three separate fractions. The first includes that portion of the gaseous mixture that is non-condensable at the temperature of liquid nitrogen (—190° C.) and consists mainly of air, methane, and hydrogen.

The second fractionation involves that portion of the mixture not retained at a temperature of —145° C., but condensable at the temperature of liquid nitrogen. The last fraction is made up of volatile sedimentary constituents that are retained at —145° C. The middle fraction contains any ethane, propane, and butane evolved from the sample, while the last fraction is made up of pentane and heavier hydrocarbons. Hydrogen and methane are determined by combustion of the non-condensable mixture over a glowing platinum wire. The water and carbon dioxide thus produced are collected and measured. The water, in excess of that require to account for all the carbon dioxide as methane, is calculated as hydrogen. The quantities of the fractions heavier than methane are determined by first measuring the initial volumes present and then measuring the carbon dioxide resulting from combustion with purified air. The increase in volume is used as a measure of the quantities of these fractions initially present, the ethane-propane-butane fractions being calculated as propane, while the heaviest fraction is calculated as hexane.

Data compiled from these analyses on samples from a number of wells, when resolved into a log, reveal definite relationships between the constituents determined, and petroleum accumulations. In the case of producing wells, located toward the edges of a reservoir, evolved hydrogen patterns are often obtained in which maximum values appear some distance above the oil sand with decreasing quantities as the sand is approached. Rosaire[2] considers the significant origin of this evolved hydrogen to be obscure at the present time, attributing some of it to free metal from bit wear, and some to indigent occurrence in the formation, but reserving the possibility that some of this hydrogen is a measure of a sedimentary constituent which may be part of the geochemistry of an

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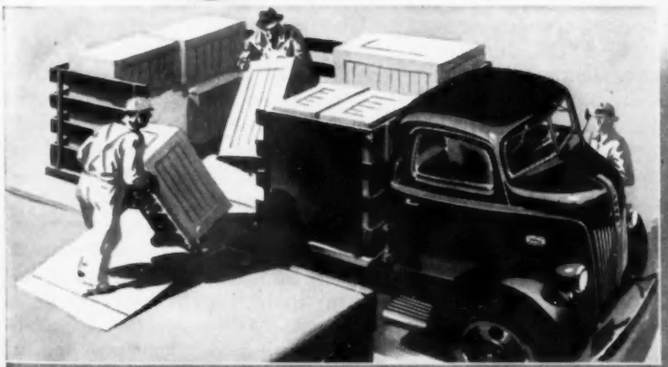

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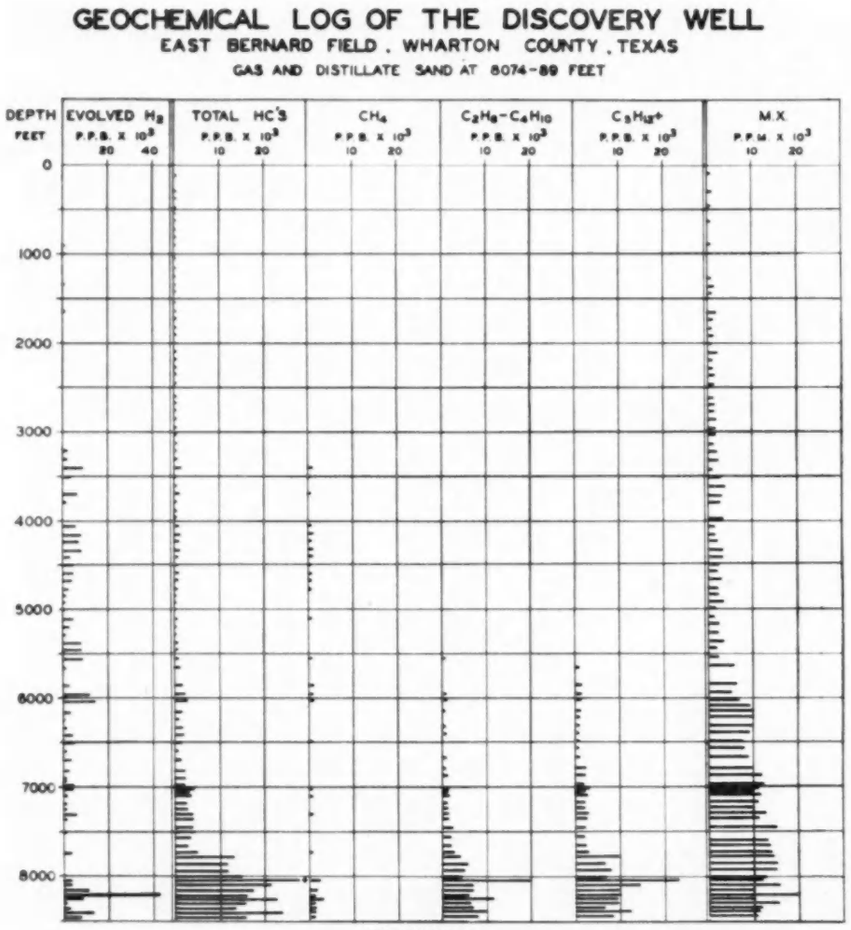


FIGURE 2

oil reservoir. This is substantiated by the fact that samples from non-producing wells generally yield negligible quantities of hydrogen.

In the case of hydrocarbons, the primary indices, logs of producing wells show low concentrations up the hole, increasing to a maximum at the deposit, although this increase is not necessary continuous nor uniform. Logs of non-productive wells show relatively small concentrations of hydrocarbons. In producing wells, the relative compositions of the various samples show a relation to the composition of the accumulation, so that an estimate of the nature of the oil, as well as its depth, may be made well in advance of drilling-in.

Geochemical well logging is strictly a prospecting method and does not propose to assay the hydrocarbon content of a producing sand, leaving this function to established electrical and formation-testing methods. In geochemical logging the best data are obtained from the less permeable formations rather than the potential reservoir rocks, the general supposition being that geologic time has established a condition of equilibrium in tighter formations, while more porous rock permits evaporation that makes for an unstatic condition of hydrocarbon content.

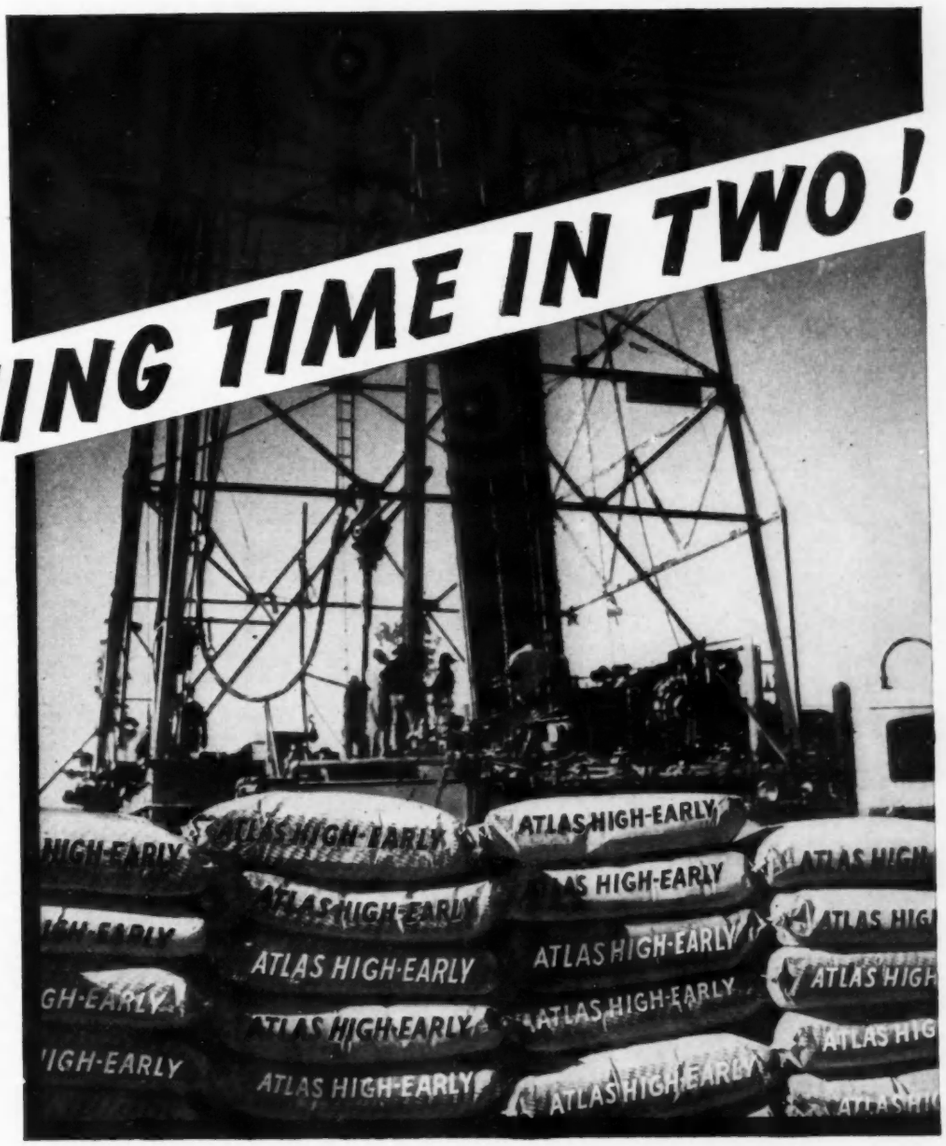
Figure 1, log of the discovery well at Rosenberg, Fort Bend County, Texas, illustrates the domination of ethane and heavier hydrocarbons over methane usually characteristic over reservoirs of gas and distillate. This domination is also apparent in Figure 2, log of the discovery at East Bernard, Wharton County, Texas, a distillate strike credited largely to geochemical logging. In the Rosenberg log, the hydrogen pattern shows increasing values down to 6200 feet, where a value of 5000 parts per billion was observed, then a steady decrease. Total hydrocarbon content, logged in the second column, was insignificantly low to a depth of 6000 feet, increasing from that point to a maximum of 28,000 parts per billion just over the distillate sand. It will be noted that the first indication of significance appeared at 6500 feet, or 1200 feet above the discovery sand. Log of the East Bernard well, which was abandoned at 8000 feet but then re-entered on strength of the geochemical log, shows the early indications of a high-gravity deposit afforded by the similar quantities of the heavier hydrocarbons and a scarcity of methane. Here the "MX" concentration, logged in the right hand column, shows a favorable trend. "MX" is an inorganic constituent found over producing areas, the exact nature of which has not yet been disclosed. It is significant because it is more sensitive to the presence of the heavier hydrocarbons than of the lighter ones.

One notable feature of the geochemical anomaly over all reservoirs is the apparent direct relationship between the amount of advance indication and the gravity of the oil in the reservoir. While indications of increasing concentration were seen 1500 feet and 1000 feet, respectively, above the distillate sands in the Rosenberg and East Bernard discoveries, there was no advance indication in the discovery well of the Dyersdale field, Harris County, Texas, as the gravity of this reservoir is 22 degrees A.P.I. Cases have been noted where a reservoir of fairly-high-gravity oil does not provide any significant advance indications. Where this occurs, it is believed due to the fact that sediments in the area are not sufficiently adsorptive to retain the escaping fractions, or the possibility that the upward diffusion had not been going on long enough to establish an equilibrium in the upper formations. However, the fact that there is generally a straight-line relationship, between the gravity of the oil and the distance above the deposit at which the first strong indication is encountered, seems to prove that the deposit is the source of the shallower hydrocarbon occurrences.

Geochemical logs of producing oil wells show the dual criteria by which the type of accumulation may be predicted: (1) the proportionate relationship between light and heavy hydrocarbons, and (2) the linear relationship between advance indication and gravity. Logs of dry holes located near production show concentrations not usually exceeding 1000 parts per billion and an insignificant hydrogen pattern, suggesting that the lateral diffusion from a reservoir is not extensive—certainly less than a mile in the cases of record.

Aside from the constituents noted, samples also may be tested for inorganic constituents, including chlorides, sulphates, carbonates,

CUTTING TIME IN TWO!



HOW ILLINOIS OIL MEN SPEED UP DRILLING WITH ATLAS HIGH-EARLY CEMENT

THAT'S what they're doing in the Illinois oil fields—literally chopping drilling time in two with Atlas High-Early Cement! Reports from Illinois well operators reveal these facts:

1. *When regular cement is used in the surface string, drilling time is 36 to 48 hours—with Atlas High-Early, time is cut to 16-24 hours!*
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Average well depth in the Illinois field ranges from 600 feet for surface jobs to 3000 feet for long strings, and the average temperature is about 90 degrees! Yet, Atlas High-Early has come through with flying colors every time! And operators say that Atlas High-Early cement provides a smoother mix.

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UNIVERSAL ATLAS OIL WELL CEMENTS

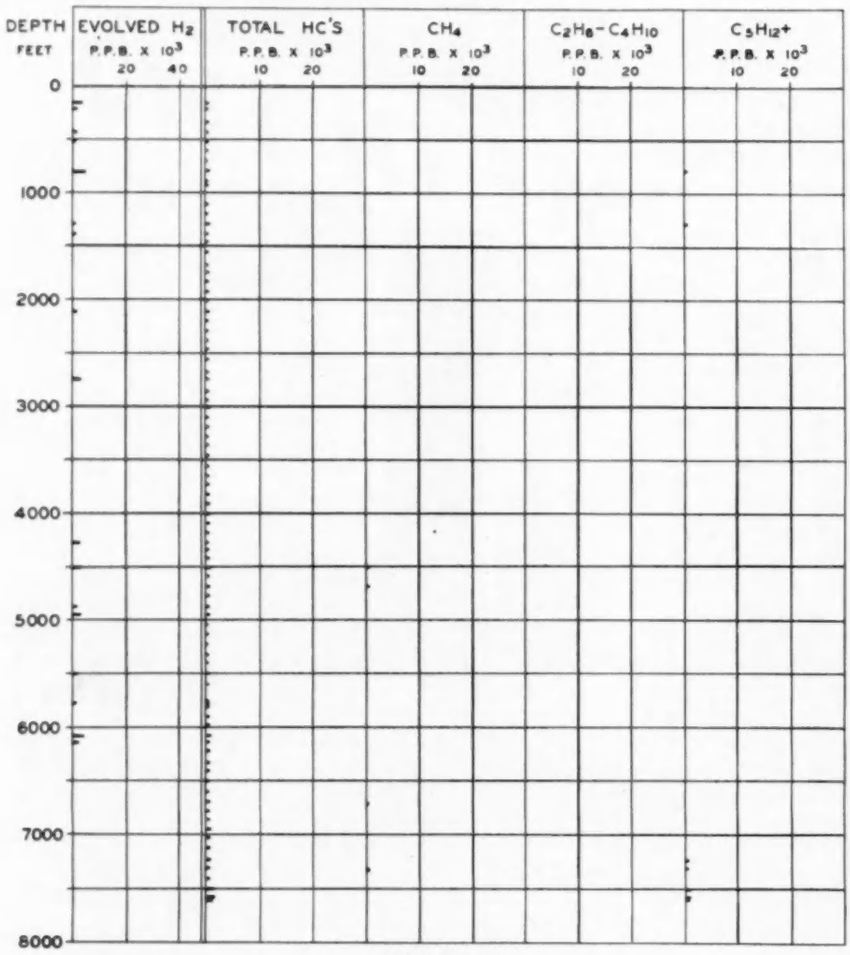

FIGURE 3

halides (undifferentiated chlorides, bromides, and iodides), and sand. While these data are not particularly valuable in making predictions they give information on the formations penetrated. Anhydrite formations yield high sulphate values, while saline formations yield high chloride values. Lime formations naturally are indicated on the carbonate log. As geochemical logging technique progresses, significant concentrations of other constituents may be found to exist.

Surface Geochemical Work

Soil analysis, or surface geochemical prospecting, now seems assured of an important role in petroleum exploration of the next decade, although it had a contentious reception and at times was in danger of breaking on the rocks of orthodox theory. Preliminary geochemical work, some of which was done on the Gulf Coast 20 years ago, had little acceptance because the industry was preoccupied with structural mapping and scorned any data that did not show evidence of structure. H. E. Minor[3] collected data in 1924 on the salinity of shallow ground water that showed the presence and areal extent of what is now the Tomball field, a major Gulf Coast producing pool. Later investigators had success in locating geochemical anomalies, but through lack of foundation in interpreting the observed patterns formed by concentrations of surface hydrocarbons and inorganic salts, were unable to claim any marked practical success. From the wealth of geochemical data scattered through geochemical literature, there came a gradual correlation and emergence of a few simple hypothesis which now sustain commercial prospecting companies.

Basis of soil analysis systems is the belief that an absolutely impervious stratum is infinitely rare or non-existent. McDermott[4] has declared that in view of the prevalence of visible oil and gas seeps, it is only reasonable to expect a much greater occurrance of microscopic leakage. Under pressure, light gases leak through steel and glass, indicating that petroleum deposits must be subject to the same effusions under ordinary formation pressures.

Samples taken at the surface are analyzed either in a trailer laboratory on location or at the base laboratory. Hydrogen, methane, ethane, butane, propane and the heavier saturated hydrocarbons are separated and identified quantitatively by most analysts, while at least one organization identifies certain inorganic minerals as well as polymers of hydrocarbons.

There is difference of opinion as to a linear relationship between the magnitude of the surface geochemical anomaly and the depth to the accumulation. Rosaire[2] states: "The hazard of their (geochemical data) use in prospecting is in that there appears to be no obvious relationship between the magnitude of these geochemical effects and either the depth to the accumulation or the relief of the associated trap. As long as the nature of these geochemical anomalies and their lack of depth or structural indication were not understood, their past use as prospecting objectives has been limited to spasmodic trials. Our predisposition to structural prospecting has led us in the past to misinterpret these magnitudes as manifestations of the depth to associated traps, whereas they probably are more closely related to the past or present magnitude of the accumulation, and to the passage of geologic time." On the other hand, Lesesne[5] writes: "There is a normal percentage of hydrocarbons in soil in all oil-bearing areas. Invariably, the percentage of both hydrocarbons and minerals is greater over shallow fields than that over deep wells. While this is generally the case the type of soil, hydrostatic pressure, and other conditions may influence this condition."

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Practical Operating Hints for

1. ENGINE HOOKUP

Second Stack on Exhaust Line Takes the Place of an Extra Exhaust System

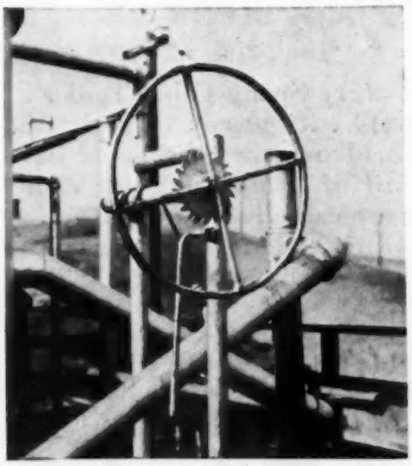
Extra stack on exhaust line of pumping engine provides better scavenging action.

BY installing an extra stack to the exhaust line and muffler, one company saved the cost of installing an entirely new exhaust system.

It was found that a 15-inch by 4-foot muffler and vertical stack made of 6⅝-inch pipe, while providing sufficient scavenging action space for the normal pumping speed of the 30-horsepower single-cylinder engine, was inadequate for the speed required of the engine while pulling the well with the bull-wheel. A tee was placed in the line just ahead of the muffler, and a 6⅝-inch stack similar to the original one was installed.

The sharp bark of this unmuffled stack was not objectionable to nearby residents during the relatively infrequent periods the well was being pulled, but a screw plug fitted with a cross-bar handle of sucker-rod material was screwed into the top of it so that the normal muffled exhaust would not be altered while the well was pumping.

With the extra stack open, better scavenging action was obtained, resulting in better performance and less heat developed in the cooling system of the engine.



This lifting device spots the grasshopper leg at any tank run-off level.

2. TANK RUNNING

Lifting Device for Grasshopper Legs

TO prevent injury of workmen while attempting to lift heavy water-filled siphons of grasshopper legs in use at several tank batteries, the superintendent of one company designed a simple lifting device.

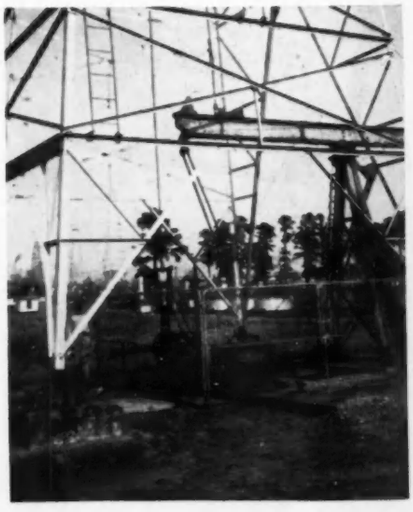
The device essentially is a hand wheel operated windlass equipped with a cog wheel that allows the grasshopper leg to be accurately spotted at any desired run-off level in the tank. Twenty teeth were torch-cut around the circumference of an 8-inch disc of ¼-inch steel plate. A hole cut in the center of the disc permitted it to be slipped over the end of a 2-inch pipe axle, and welded to the latter several inches from the end of the pipe. The axle was mounted and made to turn horizontally in simple bearings welded to two 2-inch vertical pipe standards straddling the grasshopper leg. A 5-foot length of light steel line was attached to an eye welded to the heavy pipe, and the other end clamped to the 2-inch axle. A lock consisting of a length of sucker rod and fitted to engage the cog teeth permits a fine but positive adjustment in properly locating the leg.

A 24-inch diameter hand wheel welded to the end of the axle supplies ample leverage to enable one man to quickly adjust the grasshopper leg to any desired location.

3. WATER SUPPLY

Walking Beam Used To Pump Water Well

ELIMINATION of a separate small pumping engine, with accompanying maintenance and added cost, for the water well supplying



This water well under the derrick is pumped by take-off from walking beam.

THE PRODUCTION MAN . . .

the lease, was accomplished by the foreman of one company by connecting it to the walking beam of the oil well near which it was drilled.

For the sake of convenience and economy, the shallow water well was drilled under the same oil well derrick, and just a few feet to one side of the well. The two pitmans that are normally connected to the two bull-gears of the small gear-driven pump were disconnected, raised up, and were connected again by a horizontal steel shaft. A small extra sheave wheel then was mounted in the crown of the derrick, over which a length of sand-line was run connecting the horizontal pump bar of the water well to a point near the horse-head of the oil well walking beam.

For all ordinary purposes, more than enough water is pumped into the lease storage tank by the normal monthly pumping schedule of the well to carry over periods when the well is shut down in compliance with proration regulations. However, should an emergency arise requiring water when it is not possible to pump oil, it takes but a few moments to put a clamp on the polished rod and disconnect the oil well from the pumping system. The very few occasions when the latter is necessary, however, is more than offset by the saving in both time and money that this economical pumping set-up brings about.

A two-inch pipe inserted in the tank provides an accurate production gauge.

THE practical operating hints for the drilling rig and production man, appearing in these features each week, are secured from oil fields everywhere and offer suggestions that will help to improve field efficiency and safety. The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, THE OIL WEEKLY, Houston."

4. TANK GAUGING

Pipe Aids in Obtaining Accurate Fluid Level

ONE of the most important factors in taking a special test on a well is gauging production as it comes into the tanks. A small error obtained in a gauge period of several hours often will constitute a serious error when converted into terms of barrels per day. This source of error is applicable particularly to large tanks where one inch of fluid represents from five to ten barrels. Any foam on the surface of the fluid, or surging of the level caused by in-rushing production, easily might cause a misreading of ⅛ to ½ inch on the tape or gauge pole.

Engineers on some properties have inserted a 2-inch pipe of convenient length into the tank opening, taking all gauges through it. The level thus obtained is not affected by minor fluctuations or foam on the fluid surface. The pipe must be well submerged in the fluid. It is preferable to have the pipe perforated at the lower end, allowing it to rest on the bottom of the tank. It is important that the pipe stand vertically.

Most tanks must be gauged from exactly the same point each time, as otherwise a wrong reading may be obtained due to an irregular bottom or accumulation of basic sediment.

5. WELL SERVICING

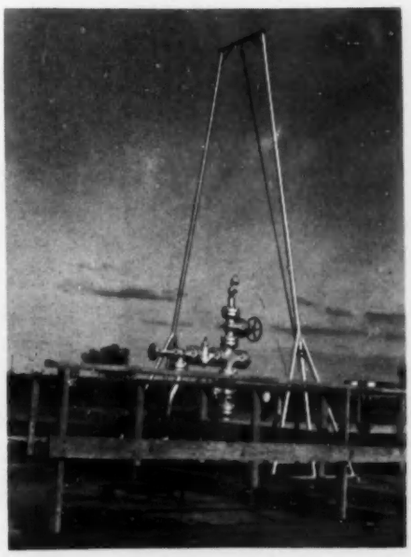
Removable A-Frame Facilitates Work

IN an effort to cut down well servicing expense, one company has made it a standard practice to install over each Christmas tree a simple yet extremely sturdy A-frame by means of which bottom-hole pressure bomb runs more easily can be made.

A well-braced all-welded structure is made of 2-inch pipe material, and rises some 20 feet above the floor. Four holes previously provided in the concrete floor into which each of the four legs can be inserted, provide a firm anchor for the framework, yet enable it to be removed at once should it be necessary in the future to move in heavy tools to swab or clean out the hole.

A small pulley and light line located directly over the top of the tubing makes it a simple matter to erect and spot the lubricator, after which it can then support the piano-wire sheave that guides the pressure bomb into the well.

Still further good use can be made of such a frame with the rope and pulley when it becomes necessary to remove or replace the heavy beans on the flow lines.



This A-frame for running bottom-hole pressure bombs employs pipe material.

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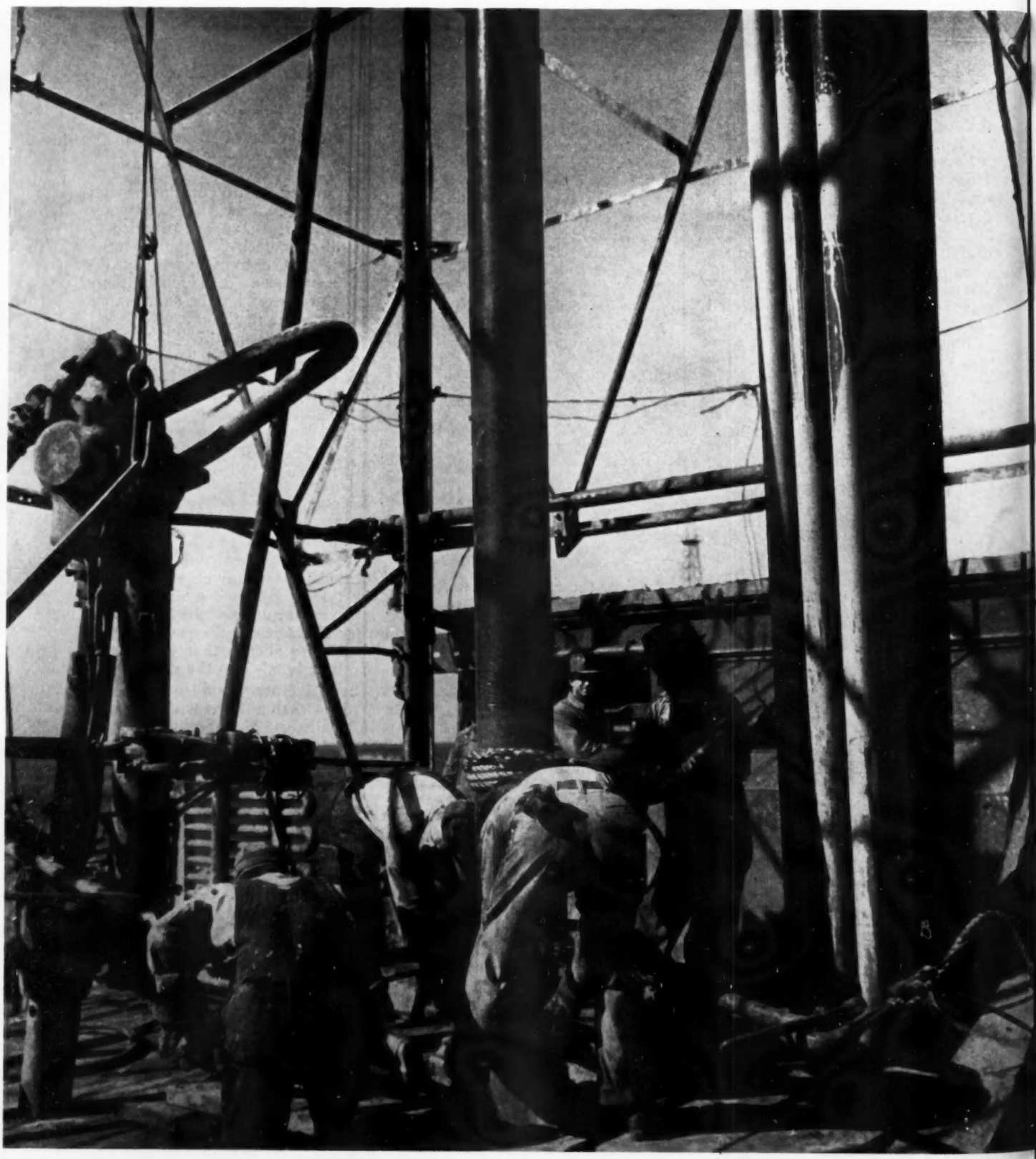

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THE combination of advantages possessed by NATIONAL Seamless puts it at the top of the list among experienced operators. Proof of this recognition is the fact that throughout the oil fields, NATIONAL Casing, Tubing, and Drill Pipe are chosen for more tough jobs than any other material. That's why NATIONAL shows up so often on record breaking runs. Under such conditions, drillers want proved reliability and naturally pick the product that offers all the best features.

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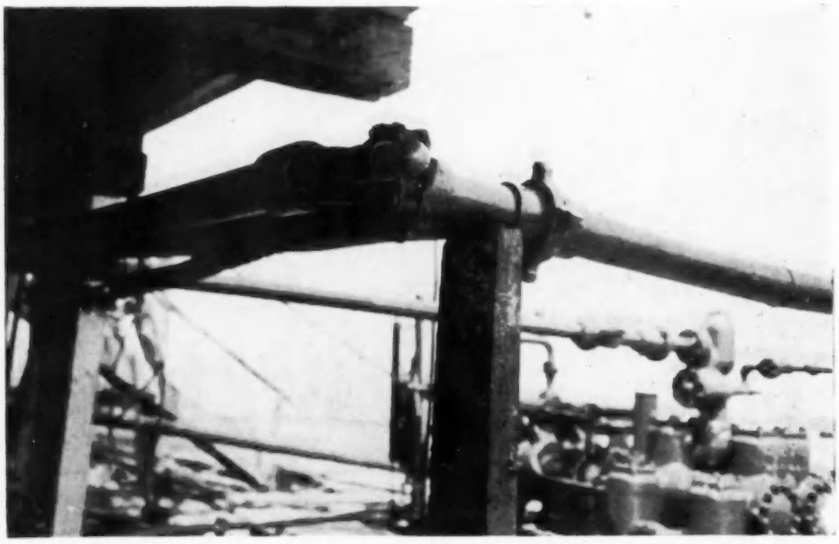
Walls without Welds

Practical Operating Hints for



Chain and turnbuckle transfer end thrust of the mud line to derrick foundation

1. MUD HANDLING

Anchoring Angle in Mud Line to Foundation Support Neutralizes Thrust on Upturn

By anchoring the angle in the mud line to one of the foundation supports, one contractor neutralizes the high-pressure thrust which otherwise must be borne by the upturn to the standpipe.

The insertion of a turnbuckle between mud line chain and foundation permits the desired tension to be maintained on the pipe. Further support to the line is provided by a substantial timber post which takes the weight of the line, the chain anchor being set with a slight downward inclination to the pier so as to assure a component of its stress being imposed on the timber and to insure its remaining in place under service vibrations.

Anchorage for blow-out preventer mud relief line directs the flow to the pits.

2. MUD HANDLING

Flow from Blow-Out Preventer Directed

Checking the blow-out preventer at frequent intervals while drilling in gas-bearing formations is a necessary safety measure to insure functioning of the device in an emergency. Many contractors not only test the preventer with the manual controls, but also use the fluid-actuated pistons, operating under mud pressure. This mud, at high pressure, must be released to the ditch for reclaiming.

To anchor the mud release line, one company drives crossed two-inch pipes into the ground above the pipe, still further preventing spreading by driving the retaining pipes through a casing thread protector. This anchorage prevents the release line from vibrating or thrashing around under high pressures, and restricts the mud flow to desired channels.

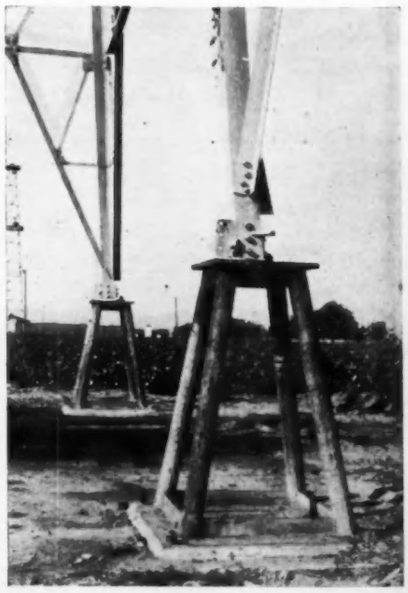
3. RIGGING UP

Derrick Supported by Four-Legged Bases

Instead of using concrete piers on which to erect derricks, one company finds it advantageous to use four-legged bases five feet high constructed of drill pipe and steel plate.

Bolted down with studs to a relatively thin concrete slab, the leg bases make it possible to rig up the derrick for drilling operations in much less time, and also present a simpler problem should the derrick be skidded to other locations. Jacks can be set on the concrete slab directly beneath the derrick leg itself, allowing skids to be placed under the flat steel edges of the base.

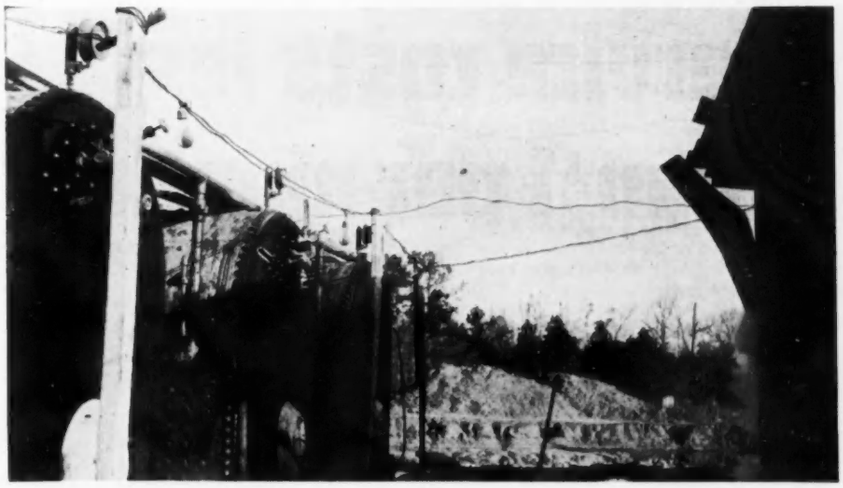
The four legs of 4-inch drill pipe are welded to heavy cross-members of 1-inch and ¾-inch steel plate. The top plate, to which the derrick



Erecting and moving derrick is facilitated when mounted on these bases.

leg member is bolted, is 24 inches square. The bottom part of the support is 48 inches square.

A minimum of work and expense is involved in removing these bases in the event of abandonment of the well, as compared to the work involved in tearing out the reinforced concrete bases. The bases also can be salvaged for use on different wells.



Wires connected to boiler safety valves make frequent testing a simple matter

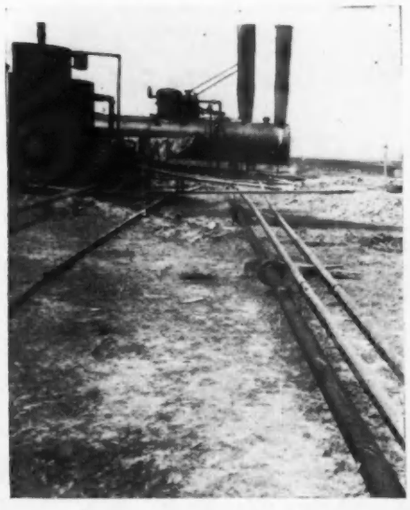
4. SAFETY

Boiler Valves Tested Conveniently

TESTING boiler safety valves, advisable at frequent intervals on all boilers operating under adverse water conditions to prevent scaling or sticking of valves on their seats, is required of each fireman of one drilling contractor as he reports to work. This thrice-daily testing of the valves means climbing atop each of the boilers to make the test, unless some sort of extension is attached to the valve lever.

This contractor runs separate wires from each valve lever to the support of the feed-pump shelter, carrying the wires high enough to insure adequate headroom, but permitting each valve to be tested from a position in front of the boiler, or even from under the shelter.

Such extensions not only simplify the task of testing, but also, through the remote control they provide, remove a possible source of steam burns or scalds from the jet released by the valve at testing.



Flanged joints of steam line permit rapid assembly and aid when moving.

5. RIGGING UP

Flanges to Connect Steam Line

BY use of flanges instead of standard pipe collars to join lengths of steam line from boiler to derrick, one contractor speeds up stringing the line and adds much to the life of the pipe. The flanges, once bucked on, may be seal-welded, and wear taken from the threaded portion of the pipe, first to wear out in service.

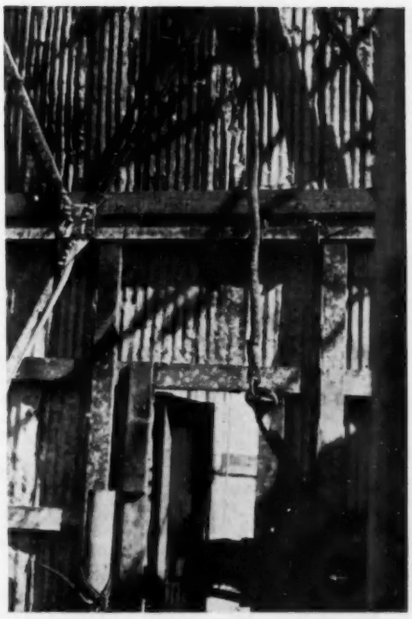
The heavy flanges, permanently attached to the pipe, protect the ends from damage which might otherwise be sustained in transportation between jobs.

6. HOSE CARE

Chafing from Wire Line Prevented

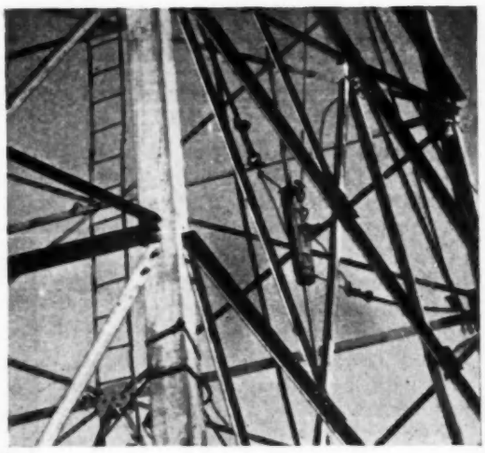
USEFUL life of a heavy rotary hose used on a California deep drilling project is being materially lengthened by covering a 20-foot length of ¾-inch water hose over the lower end of each of the ⅝-inch wire counter-weight lines that support the heavy pipe tongs just over the derrick floor.

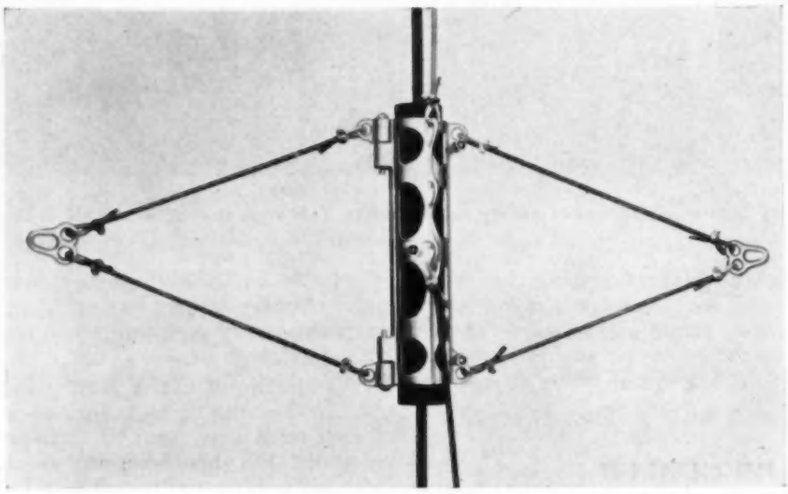
As the loop of the rotary hose approaches the derrick floor shortly before a new joint of drill-pipe is added, the throbbing and swinging hose is usually subjected to considerable wear and chafing on the counter-weight lines. Use of the water-hose covering transfers wear from the rotary hose to the soft rubber of the hose covering the wire lines.



Rubber hose over the wire counter-weight lines protects the rotary hose.

Wire Line Guide Service costs less than $1 per month





One of the largest independent oil operators, drilling in a deep field south of Houston, reports use of a Patterson-Ballagh Wire Line Guide for three years. During this time only one set of refills was purchased. The cost of operation has been only $1.00 per month. You can't beat that for economy.

All this service for only a few cents per day:

1. Stabilization of wire line.
2. Proper spooling.
3. Elimination of wire kinking.
4. Reduction of strand wear.
5. Wire line protection.
6. Better alignment.
7. Increased wire line speed.
8. Increased wire line life.

See Composite Catalog

PATTERSON-BALLAGH
CORPORATION

Los Angeles Houston New York City

PATTERSON-BALLAGH WIRE LINE GUIDES

HIGHLIGHTS IN THE WEEK'S NEWS

Washington

Oil and Gas Figures Largely In Resources Board's Plans

Preliminary plans of regional offices of the National Resources Planning Board for conservation and use of resources, made public by the board April 9, show that three of the ten offices considered petroleum development one of their major objectives.

In the South Central, Mountain and Pacific Southwest area, oil resources were shown by the reports to be a subject of concern.

In the South Central region, which includes the Gulf oil areas, the report recommends conservation of energy resources by developing the fullest possible use of wasted natural gas and water power, in lieu of other fuels, and advocates unit operation for oil pools. It also recommends that natural gas pipe lines be extended as rapidly as possible to markets in various parts of the United States not now so served, in order to provide outlet for the gas now being wasted and exhausted into the air, and that an investigation be made of advisability of utilizing private pipe lines as common carriers when they are not in use for private operation, so as to make full use of existing facilities and avoid unnecessary duplication.

The report of the Mountain States office suggests development of oil production from oil shale and heavy sulphur oils through further research, and urges cooperation and regulation to determine practicable methods and bring about more effective conservation and utilization of the region's petroleum and natural gas.

The Pacific Southwest report points out that California has about one-sixth of the Nation's known underground reserves of petroleum and a large proportion of the natural gas, while Utah, Colorado and Wyoming have, locked up in oil-bearing shales, "five times the present known petroleum reserve producible from the Nation's oil fields."

Since 1929, oil production in California has been prorated to some extent by voluntary agreement, and this control has been helpful in preventing overproduction and stabilizing prices, but further regulation of production would make the voluntary agreements more effective.

Hits "Unnecessary" Drilling

"While there is little evidence that petroleum is needlessly lost or wasted due to technical inefficiency," the report said, "more wells are still being drilled than are needed. Unit operation of oil fields permitted by California law should be extended.

"Since 1929, wastage of natural gas in California has been reduced. Because oil and gas are produced together, gas losses are difficult to overcome completely."

The report for the Pacific Southwest area, going into the oil situation in more detail than did other regional offices, recommends state legislation establishing production quotas for zones, properties and wells in each oil field; establishment of a national policy and conservation program, supplementing state legislation, to regulate production and export of petroleum throughout the nation; curtailment of further gas wastage by intensive repressuring and storing in the ground and encouragement of the production and marketing of liquefied natural gas; continuance of scientific research to determine practicable methods for more effective conservation and utilization of petroleum and natural gas, on which can be based a "long-term conservation plan that will point the way toward more efficient utilization of the region's energy resources," investigation of methods for recovering higher percentages of oil from natural deposits, and development of economical processes for utilization of the region's oil shales.

In another report, the board listed federal agencies which are giving aid in local planning, citing as aids to planning for the oil and gas industries the Bureau of Mines, General Land Office and Geological Survey of the Interior Department, and the Federal Power Commission.

The bureau, it was explained, is primarily a research agency and, although its services have seldom been called upon in connection with local planning, "in any case where minerals are involved the knowledge and experience of the bureau's staff might contribute effectively to a thorough analysis of the problems to be solved."

In the General Land Office, it was pointed out, a new branch of planning, use and protection has been established, which is concerned to a substantial degree with the formulation of general policies and procedures with respect to the disposal and administration of the public lands. The Geological Survey also has a conservation branch.

Through the regulatory power exercised over natural gas, the Federal Power Commission was seen in a position to aid in regional planning, where the conservation, production, transportation or distribution of natural gas is involved.

Defense Program Looks to Curbed Civilian Buying

A four-point program to achieve a dual objective of averting price inflation and diverting larger amounts of production from civilian to national defense needs is rapidly nearing perfection in Administration circles.

Workng on the defense program from various angles, federal agencies have developed a formula which calls for higher taxes on both individual and corporate income and government borrowing out of savings, to reduce consumer demand by reducing the amount of money civilians will have to spend and thus free factories producing civilian goods for the making of defense materials; strengthening of the powers of the Office of Production Management to control prices; and curbs on installment buying.

The cumulative effect of all these expedients, if adopted, it was said in Washington, will be to curb the activities of civilian industries, including the oil industry.

A sharp warning that the government will enforce a reduction in the volume of civilian spending in the near future was voiced this week by Donald M. Nelson, director of purchases in the Office of Production Management.

To be accomplished by increased taxation and government borrowing out of savings, the curtailment of civilian purchasing will have as its objectives the switching of productive capacity from civilian to defense uses and the prevention of undue increases in prices. With a similar end in view, the Federal Reserve Board is studying the possibility of curbing installment sales of automobiles and other things financed by banking institutions.

Income Tax Boosts

In the field of taxation, doubling of the individual income tax rate and a 25 percent increase in the corporation rate, buttressed by increases in the present excise levies and the imposition of new taxes, has been suggested as the possible basis of the new revenue bill to be drafted next month by the House Ways and Means Committee.

The present normal tax of four percent on individual income would be increased to eight percent under this program. The corporation tax rate now is 24 percent on income of $25,000 or more, with a scale graduated downward for incomes of less than that amount. It is proposed to raise the 24

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percent rate to 30 percent, with corresponding increases in the lower rates.

About $1,000,000,000, or one-half to two-thirds of the amount of new revenue to be raised, could be secured by these increases alone, it is contended by Senators George and Taft, who are sponsoring the program. The remaining money could be obtained from increased excess profits taxes and nuisance levies, and new forms of special taxes which may be developed.

There are indications that the proposal will be strongly opposed if offered in Congress, as imposing a disproportionate burden upon persons in the low income brackets, especially those who have just joined the ranks of taxpayers as a result of the lowering of the personal exemptions in the revenue bill adopted last year.

On the other hand, it is contended that there are no new sources of income which can be tapped for anywhere near the amount of money needed. The only other suggestion which would return a sizeable revenue is for a tax on pay rolls, which is opposed because it would make a taxpayer out of every person in the country who has a job.

Explaining the probability of forced reduction of consumer buying, Nelson pointed out that the maximum productive capacity of the country's existing plants is rapidly being approached as a result of the expansion developed by the defense program, and the time is coming when it will be necessary to provide new facilities and equipment and train labor.

Since this will consume considerable time which cannot be spared, he said, it will be necessary to switch civilian plants to defense work, which will mean that consumer demand quickly will over-run supply and, unless preventive measures are adopted, lead to a runaway price rise which the Administration is determined to avoid.

While not all industries are so situated that it will be necessary to curb civilian activities, it was said, those that have ample facilities to meet both civilian and defense needs will be affected by the measures taken against others. Thus, the oil industry, admittedly in the former capacity, will feel the effects of reduced buying power engendered by taxes and the limitations on installment buying.

Nelson admitted that curtailment of civilian expenditures alone will not prevent price increases, and disclosed that the price controls now exercised over a few strategic materials by the OPM will be extended to cover other commodities as quickly as they show signs of price inflation.

It will be impossible to keep all prices at their present levels, and some commodities will show increases because of conditions particularly affecting them, he said. However, he added, "if we get a real price spiral there will be a long, long drop at the end of it, and when we hit bottom it will wreck our whole economy. That must be averted."

Revise Sharon Ridge Rules

The method of allocation in the Sharon Ridge field, Scurry County, has been revised in a new order of the Texas Railroad Commission. The field was prorated on straight acreage, but under the new order it will be assigned on acreage and per well, with one third of the oil distributed on acreage.

Oil From Coal Sufficient for 3000 Years, Ickes Reports

Fears that the United States will ever suffer from a shortage of gasoline and oil were dissipated April 10 by a report of Secretary of the Interior Harold L. Ickes that the United States Bureau of Mines has developed a process for hydrogenation of coal which, if applied to the total coal reserves of the nation, could yield enough oil to supply all needs for almost 3000 years at the present rate of consumption.

Although the bureau's process has been developed far enough to demonstrate that it is entirely feasible, no estimate has yet been attempted of the cost of gasoline and oil produced from coal on a perfected quantity production basis, it was said.

The results of the bureau's work were made public by Dr. R. R. Sayers, director, through four bureau chemists at the St. Louis meeting of the American Chemical Society.

Oil yields vary with the type of coal used, some types yielding as much as two tons of oil for each three tons of coal, and others half that much.

The crude oil produced from coal, Dr. Sayers declared, is similar to crude petroleum and yields a relatively high percentage of gasoline and various oils, some of which are of possible industrial significance as sources of phenolic compounds and solvents used in the lacquer and plastic industries.

Reports from the Pittsburgh laboratory, where the work was conducted, show that in the first stage (after the coal has been liquefied and before the products are cracked to produce various compounds), the oil products obtained contain about 20 percent gasoline, 70 percent oil of medium viscosity and boiling range, and 10 percent of a heavy oil of high viscosity and boiling range. The yields of crude oil range from 67 to 31 tons per 100 tons of coal, or 168 to 78 gallons per ton of coal as mined.

The ultimate yield of gasoline may be easily estimated, it was said, for the conversion of the medium oil into gasoline is readily accomplished by well known methods, and the yields of gasoline are about 100 gallons for each 100 gallons of oil.

Undertaken as a preparedness measure, in anticipation of the day when our petroleum reserves are exhausted or in serious danger of depletion, the studies are to be continued by the bureau until it has obtained knowledge that will enable it to determine the yields and quality of liquid products obtainable from various American coals so that when the commercial need arises American industry will be in a position to select the most suitable coals and make rapid progress in developing synthetic production.

However, it was said, even before our natural oil is exhausted, coal hydrogenation costs probably will be so reduced as to make that source an auxiliary supply of gasoline, diesel oil, tar acids and solvents.

In explaining the experiments carried on by the bureau, Dr. Sayers declared the essential differences between bituminous coal and petroleum are the ratio of the number of carbon atoms to hydrogen atoms (about 1.1 for bituminous coal and 0.6 for petroleum); the much lower oxygen, nitrogen and sulphur content of petroleum; and the lower molecular weight of the petroleum constituents.

Accordingly, to produce a petroleum-like material, it is necessary approximately to double the hydrogen atoms in bituminous coal, to remove virtually all of the oxygen, nitrogen and sulphur, and to dissociate or crack the coal molecules until their molecular weight about equals that of the petroleum molecules. By adding hydrogen to the coal under pressures of 3,000 to 15,000 pounds per square inch at temperatures from 750° to 950° F., oil similar to crude petroleum is obtained.

Control

Illinois Group Fights Proposed Proration Law

The Illinois Oil Producers' Equity Association last week went on record opposing a proposed oil proration measure being drafted for introduction in the legislature.

A meeting called by the association last week heard former Governor John Stelle declare that proration would mean the end of wildcatting in the state. A resolution opposing proration was adopted.

A new organization to embrace landowners, Illinois Oil Equity and Farm Owners' Association, was formed to work with the Illinois Oil Producers' Equity Association against proration.

Officers of the new group are A. B. Anderson, McLeansboro, president; B. E. Martin, Salem, vice president, and Dorsey Hager, Centralia, secretary.

Texas Attorney General Rules on Spacing Questions

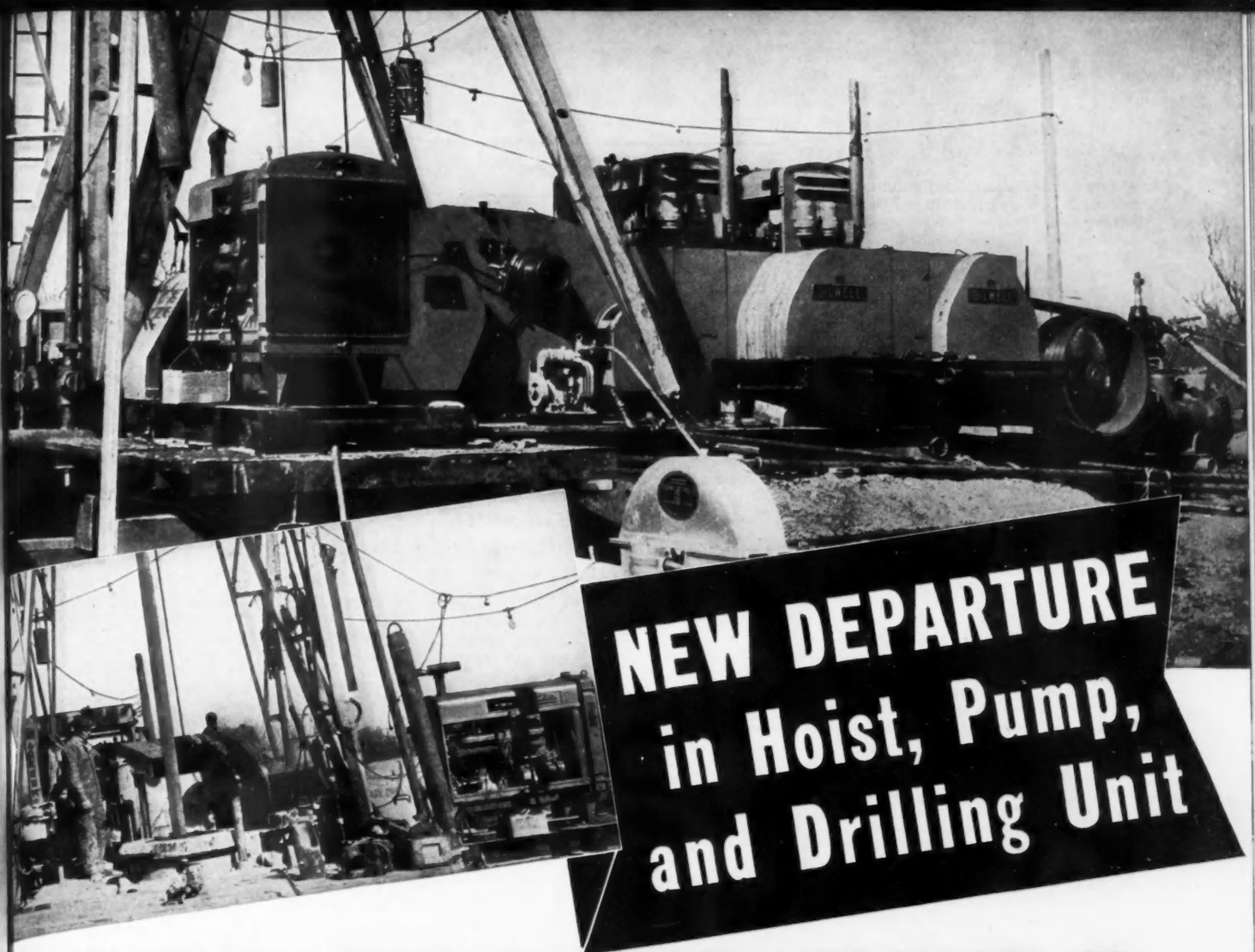
The Texas attorney general last week, in answer to questions put by the Texas Railroad Commission, ruled on several questions involving spacing rules.

In regard to who should receive notices, the attorney general found that all adjacent lessees should be notified, and that by adjacent lessees was meant the owners of oil and gas leases governing tracts of land adjoining or bordering on the tract of land on which the application for an exception is filed. Previously, the commission had been in some doubt on this point, and had frequently sent notices to owners of leases which did not touch the applicant's lease, but which the commission felt might be affected by the drilling of an additional well.

Where the applicant owns all contiguous and adjacent leases, the attorney general said that it was not necessary to notify him as an adjacent lessee, the notice of the date of his hearing being sufficient.

The attorney general told the commission that if the well to be drilled complied with the commission's standard Rule 37, that is, if it was not an exception and might be drilled as far from lease lines and as far from other wells as the rule provided, then the commission need issue no permit. The rule itself constitutes a permit when these conditions have been met.

On another phase of the question of notice, the attorney general ruled that if a property was sold after a hearing was set, and the notices issued, no



NEW DEPARTURE in Hoist, Pump, and Drilling Unit

WAUKESHA POWERED

At Stamford, in the North Texas area, the Hall-Jordan Drilling Co. are doing a remarkably good drilling job. Their drilling rig is a newly developed *Oilwell* outfit. One big reason for its unusual efficiency is that its three Waukesha Engines give it a wide range of *usable* and *dependable* power.

In the left foreground of the larger illustration, and at the right in the smaller, is a Model 6-GAK Waukesha Engine. It is part of the *Oilwell* CT-1715 Rotary Drilling Unit which provides a direct drive from the motor to the rotary through a hydraulic torque converter and a geared speed increaser. This effective combination has the inherent torque-speed action of steam—and gives the operators all the flexibility and smoothness of steam, with a natural-gas fueled internal combustion engine.

At the right, in the larger picture, are the two Model 6-WAK Waukesha Engines, also burning natural gas, which drive the *Oilwell* No. 64 hoisting unit, and *Oilwell* No. 14P-HD 7½″ x 14″ power pump. Dual drive permits individual and compound arrangement of the two engines.

Waukesha Oil Field Engines range from 10 hp. to 350 hp., gasoline or gas; 30 hp. to 325 hp. diesel fuels. *Write for complete list of Waukesha Engines and Power Units with ratings. Bulletin 1079-J. It's new!*

WAUKESHA MOTOR COMPANY, WAUKESHA, WIS.
NEW YORK • TULSA • LOS ANGELES

WAUKESHA *Oil Field* ENGINES

additional notice need be sent to the purchaser.

The commission asked whether a permit might be granted on a 2-acre tract, subdivided from a 4-acre tract before discovery of oil and adoption of regulations in the field, either to prevent confiscation or to prevent waste.

The attorney general found it would not be necessary to grant the permit to prevent confiscation on a portion of the subdivided four acres, but that such a well might be granted to prevent waste. However, the attorney general pointed out that the original spacing rule issued in 1919 required spacing in the center of a square 2.07-acre tract, so that no 2-acre tract would be sufficiently large to come within provisions of the rule, regardless of its shape.

"The spacing rule in effect at the time of the subdivision controls in determining whether a special permit is required," the attorney general said. If a 5-acre tract is of such shape that a well can be drilled on it more than 150 feet from the nearest property line and more than 300 feet from the nearest producing well, then an operator is entitled to a well, if subdivision took place while the 150-foot rule was in effect.

The attorney general approved oral partitions of land as legal, if sufficient proof could be made, and held that such oral partitions were subject to the same general status governing subdivision under the rule, as a partition by the courts.

Of particular interest was the statement that if the same individual owns two small lots across the street from each other, he is entitled to only one well on the two, because normally he is the owner of the minerals under the street or road in front of his property, and therefore it constitutes only one unit.

When these interpretations are considered, along with the commission's new regulations, it appears certain that applications under Rule 37 are likely to have a more definite trend, and attorneys will be able to advise their clients more accurately than they have in the past.

The commission has adopted the policy of requiring each operator to explain to its examiner the reasons he is advancing as a basis for the application he presents. This must be done in writing, or else through the company representative who appears. In some cases, especially the more difficult ones, engineers or geologists are used invariably to present these reasons, and to show the basis for granting the application to prevent either confiscation or physical waste.

In order to relieve some of the pressure on the commission, the policy has been adopted of refusing any information concerning an application after the case has been submitted, and before signing of the order. In other words, it is impossible for an applicant to determine when his case will be acted on by the commission, or whether the commission has considered his application, unless he makes a trip to Austin and investigates for himself, and requests the commissioners to act on his case.

Longhorn Repressuring Hearing Scheduled

The Texas Railroad Commission has scheduled a hearing for April 23 to consider an application for repressuring the Longhorn field, Duval County.

Pipe Lines

Natural Gas Pipeline Awards Two Contracts

W. A. Bechtel Company has been awarded contract for 83 miles of 26-inch pipe line to extend from Osceola to Muscatine, Iowa, by Natural Gas Pipeline Company of America. Contract for 101 miles of 26-inch to extend east of Crescent, Iowa, has been given O. E. Dempsey Construction Company. This construction is part of a major program to increase the capacity of its system extending from the Texas Panhandle to northern areas.

Stanolind Awards Contract For New Line and Recovery

Stanolind Pipe Line Company has awarded contract to Oil States Construction Company for construction of 39 miles of 12-inch line and recovery of 64 miles of 8-inch line. The work is divided into two sections, one extending from a point east of the company's pumping station at Carrollton, Missouri, to Mindem, Missouri. The second seciton extends between Fort Madison, Iowa, and Lomax Junction, Illinois.

Loops to Double Memphis Gas Supply

Gas lines paralleling present lines of 55 miles will be laid between Memphis and the Monroe, Louisiana, gas field, according to President Birger L. Johnson of the Memphis Natural Gas Company, owner of the lines. The new lines will double the present supply of gas for Memphis.

Globe Oil & Refining Plans 220-Mile Gasoline Line

Bids shortly will be received by Globe Oil & Refining Company for construction of a 220-mile 6-inch gasoline line between the firm's refinery at McPherson, Kansas, to Council Bluffs, Iowa.

February Production Up for Third Successive Month

Increasing for the third successive month, domestic oil production in February averaged 3,599,700 barrels a day, an increase of 30,400 barrels over the January average but nearly 150,000 barrels below the level of February, 1940, it was reported April 11 by the United States Bureau of Mines.

The February increase, the bureau explained, was experienced in all the major producing states except Illinois, where the decline which started last summer continued. Michigan's daily average fell below 40,000 barrels for the first time since July, 1937, it commented.

Exports of crude oil continued to slump, but imports recovered from the decline recorded in January, the report showed. There was an increase in daily average crude runs to stills, but not enough to absorb all the new production, with the result that the balance of supply and demand for crude was again reversed and stocks increased about 1,200,000 barrels compared with decline of 800,000 barrels in January.

"The lack of pressure on heating oils because of the relatively warm weather in February had a marked influence on yields of the major products," the bureau said. "The distillate fuel yield fell from 15.4 percent in January to 14.7 percent in February, whereas the gasoline yield rose from 42.8 to 43.3 percent.

"The domestic demand for motor fuel continued to exceed all estimates as every major factor, weather, industrial activity, and market conditions, was favorable to heavy shipments. The domestic demand for February was 42,253,000 barrels, or 17 percent above a year ago on a daily average basis. Stocks of finished and unfinished gasoline rose to 95,646,000 barrels on February 28. Although this represents a gain of about 5,300,000 barrels for the month, it left stocks in much better shape than a year ago, particularly on a day's supply basis.

"The domestic demand for distillate fuel oil in February, 1941, was slightly higher than last year as the influence of more heaters in operation and larger demand for gas oil and diesel oil for industrial purposes outweighed the weather factor."

Stocks of aviation gasoline continued to accumulate, in the face of a reduction in production, the report showed. Production for the month was 1,238,000 barrels compared with 1,566,000 barrels in January, but, while transfers to regular gasoline showed little change (323,000 barrels against 322,000 barrels), exports declined from 440,000 to 355,000 barrels and domestic demand dropped from 563,000 to 483,000 barrels. As a result, stocks increased from 6,595,000 barrels on January 31 to 6,672,000 barrels on February 28.

Annual Meeting of Texaco Old Timers Club

The Texaco Old Timers Club of Houston will hold its service award dinner at 6 p. m. April 16, at the Houston Club. Members of the club include all employes of The Texas Company in Houston and surrounding territory who have had 25 years or more of service.

Officers of the club are Ira McFarland, president; A. B. Patterson, R. J. Daniel and W. B. Williams, vice presidents; T. N. Dawson, treasurer, and J. H. Glass, secretary. Members of the arrangements committee in charge of the meeting are C. W. Redman, chairman, A. S. Bailey, E. E. Dattner, Arthur Lefevre, Jr., O. V. Summers and B. E. Emerson.

Those to receive this year 30-year service awards of wrist or pocket watches are C. O. Crouch, E. R. Davis, John German, C. W. Geiger, W. E. Green, J. B. James, John Porter, V. L. Porter, C. W. Redman, Ernest J. Rodeillat, N. A. Russell, W. B. Thurmond, W. P. White and T. L. Williamson.

Diamond pins, lapel buttons or watch charms, marking 25 years service, will be presented to David W. Adams, Mrs. Maude Alyea, W. A. Carnes, R. B. Coddou, Claybron F. Counce, A. H. Craddock, K. O. Cramer, E. G. de la Moriniere, A. J. Doss, H. D. Gohlman, Jr., E. E. Griffin, W. T. Graham, J. W. Hagins, D. B. Harrell, A. F. Jaggi, Chas. Koch, A. R. Lawshae, J. S. Leach, G. A. Le Clere, H. Lynch, K. G. Mackay, G. R. Maddox, J. R. Maske, J. L. Massey, Mrs. Frances McCaleb, R. B. McDonald, G. B. Murray, T. W.

ONCE AGAIN-

A WILD WELL IS SUCCESSFULLY CAPPED

THIS TIME ON A BARGE LOCATION IN THE GULF COAST

On March 8 this well, being drilled from a submergible barge in a Gulf Coast field, blew out through casing that was being run. Gas flow, estimated at 150,000,000 cu. ft., ignited and destroyed the derrick and part of the drilling rig. Several hours later the fire extinguished itself but the well continued to "blow." The photographs at right show the Cameron Pressure Operated Gate Valve used in the capping operations.

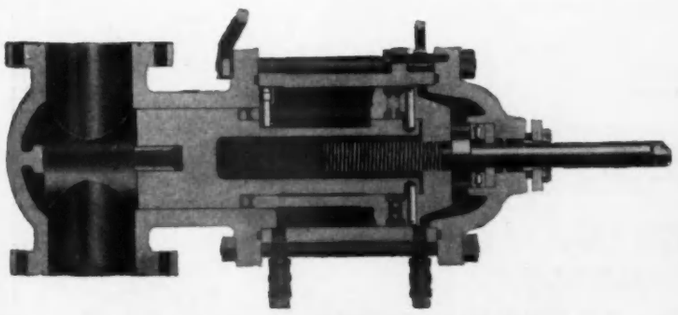
1 Cameron 12", 6000 Lb. Test Valve assembled in stack of flanged spools, ready to be stripped over joint of casing protruding from well.

2 Capping manifold being lowered over gas stream. Note gas flowing out top of stack.

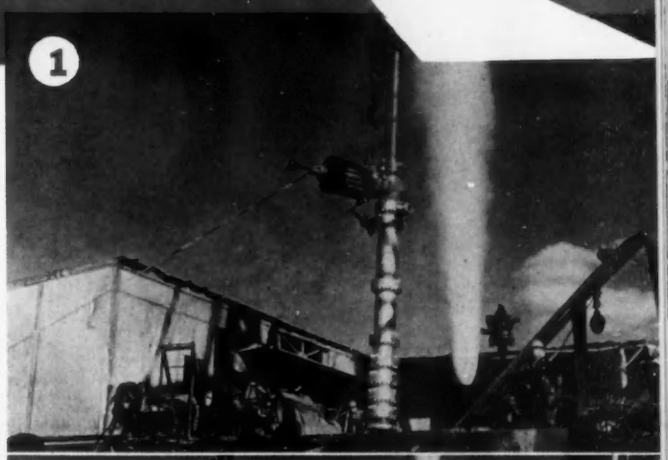
3 On third attempt, capping manifold is successfully bolted down on top of drilling control hook-up beneath derrick floor. *During these operations, full volume of gas flow was directed through Cameron Valve for approximately six hours.*

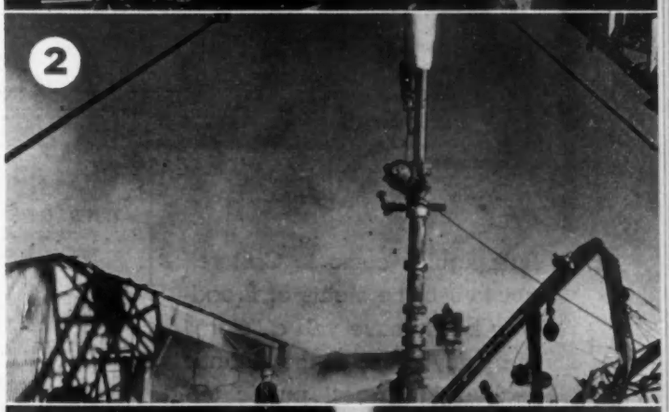
4 When closing pressure was applied to Cameron Valve *it sealed perfectly, although it was substantially sand cut.*

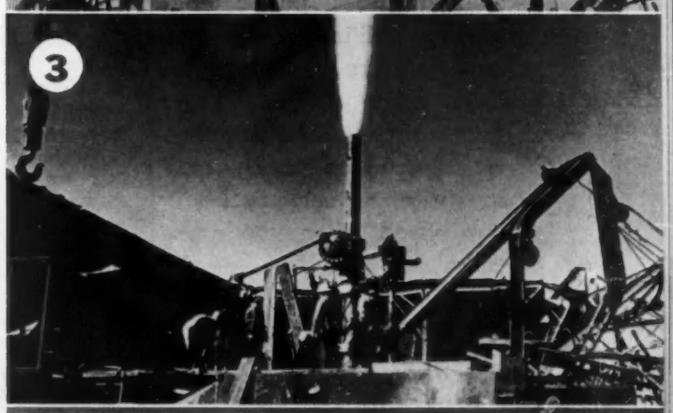
The obvious lesson to be drawn from the prompt and successful capping of this wild well is that equipment designed to withstand substantial cutting action and still seal off tightly is worth whatever it costs in a capping manifold built to specific requirements. It is also obvious that extensive and versatile shop facilities, and men experienced in fabricating and assembling special manifolds quickly, are indispensable factors in getting the job done promptly, correctly and satisfactorily. Cameron Iron Works, Inc., invites operators who require assistance in emergencies to make full use of its facilities and experience.



Cross-section view of Cameron 6000 Lb. Test Pressure Operated Gate Valve.







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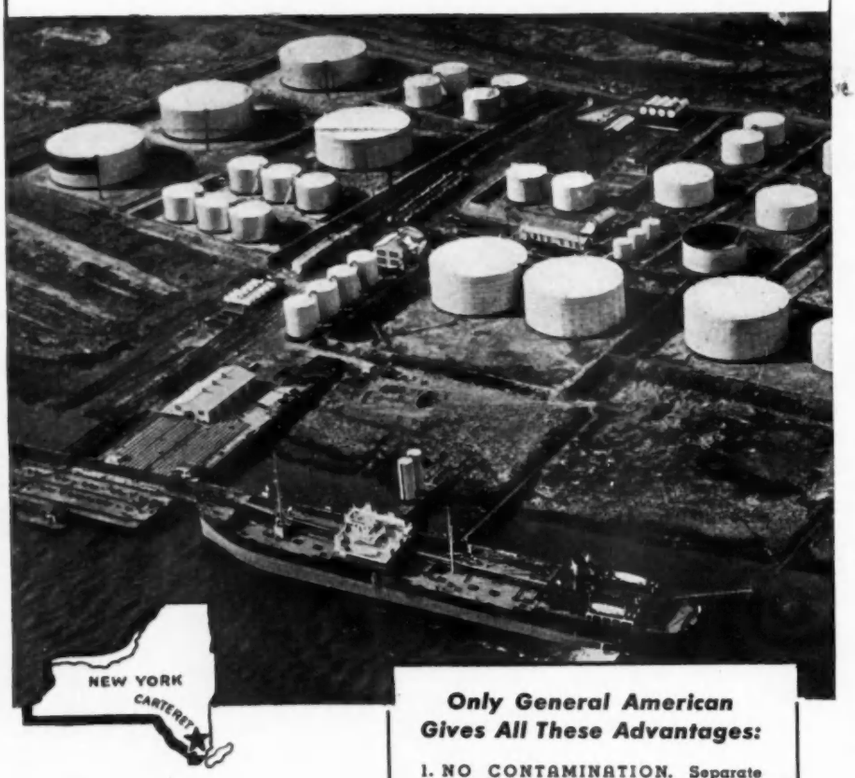
Oklahoma Representative: Paul Edkin, Tulsa.

Across the bay from the Great White Way



Bulk liquids come to Carteret, not to see the sights of Broadway but to save you a "sight" of money! Here at the Atlantic seaboard's largest public terminal are facilities for speedy storage and re-distribution—with all seven **exclusive** advantages of General American service. If you ship east by rail or coastwise steamer, you'll be money ahead when you use Carteret.

Only General American Gives All These Advantages:

1. **NO CONTAMINATION.** Separate pumps, lines, storage zones for dissimilar commodities.
2. **MODERN PROTECTION.** Latest safety appliances; lowest insurance rates, minimum evaporation losses.
3. **RELIABLE CUSTODIANSHIP.** Our warehouse receipts are highest type of collateral everywhere.
4. **INDEPENDENT OWNERSHIP.** Strictest privacy; we do not buy, sell or refine any commodities.
5. **NO WHARFAGE.** There is no wharfage charge at our own private docks.
6. **SPEED WITH SAFETY.** Day and night crews, complete facilities, eliminate all shipping delays.
7. **WORLD'S LARGEST TANK CAR FLEET.** One car or hundreds, wherever and whenever needed.

Strategically located to serve you!

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GENERAL AMERICAN TANK STORAGE TERMINALS

Goodhope, La. and Westwego, La., (Port of New Orleans)
Corpus Christi, Texas
Carteret, N. J. (Port of New York) Galena Park, Texas (Port of Houston)

A DIVISION OF GENERAL AMERICAN TRANSPORTATION CORPORATION

Murray, Frank M. Nolen, R. L. Parham, E. C. Pecht, C. L. Raney, E. Rapp, O. E. Reynaud, Frederick D. Russell, E. M. Ryan, L. A. Scholl, Jr., W. T. Shadle, Frances M. Shanks, James R. Sick, Lynn Stanley, James G. Taylor, Charles Timmerman, G. E. Ware, M. R. Warren, Roy Watson, J. B. Watt, R. S. Welborn, A. R. Wilson, C. M. Wiseman, E. H. Wohlfahrt, and J. R. Wood.

Active membership in the club is 265.

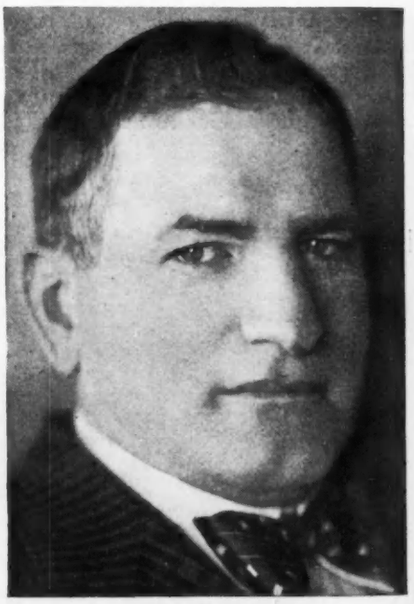
Conry Resigns as Carter's Head; Succeeded by McCollum

The Carter Oil Company's board of directors Friday accepted resignation of J. J. Conry as president, effective April 30. Conry will be succeeded by L. F. McCollum, former executive vice president and manager of the exploration department.

Conry started work in 1901 with Buckeye Pipe Line Company in Ohio. He obtained experience with the old Prairie Oil & Gas Company at Independence, Kansas, and Nowata, Oklahoma; was sent to Rumania in 1910 with Romano-Americana Oil Company. He returned to the United States in 1916 and joined The Carter Oil Company in Tulsa, where he directed the company's exploration and production activities in Eldorado, Hewitt, Burbank and Seminole fields.

In 1918, he became production manager; in 1928, he was made director; in 1933, he was promoted to vice president, and in 1936, made executive assistant, and president on January 1, 1938.

O. C. Schorp, vice president and manager of the production department, will become executive vice president, and will be succeeded as production manager by J. R. McWilliams, Shreveport, now president of Louark Producing Company, which is now in the process of merging with The Carter Oil Company. Harold F. Moses, chief geologist, will assume added responsibilities of manager of exploration department, with Condon C. Mackay, now head of the land division, becoming assistant exploration department manager.



J. J. CONRY

Eastern District A. P. I. Program

J. J. SCHMIDT
Eastern District Chairman

FIVE papers on secondary recovery methods and projects have been scheduled for the spring meeting of the Eastern District, American Petroleum Institute's Division of Production, to be held in Pittsburgh, April 17-18. One session will be devoted to this subject.

Another session will be devoted to papers and discussions on drilling and development problems in the Eastern States, while still another will cover prospecting, developing and operating practices, equipment, and underground surveying.

The annual dinner will be held on Thursday evening at the William Penn Hotel, and a special open house has been planned for Wednesday evening, preceding the meeting, by the Engineers' Society of Western Pennsylvania.

Papers on secondary recovery subjects include:

"Air and Gas Drive in Pennsylvania," by R. B. Bossler, Brundred Oil Corporation, Oil City, and Parke A. Dickey, Pennsylvania Topographic & Geologic Survey, Harrisburg, Pennsylvania;

"Secondary Recovery in Ohio," by J. E. Schaefer, The East Ohio Oil Company, Cleveland;

"Secondary Recovery in Kentucky," by N. M. Wilder, Petroleum Exploration, Inc., Lexington, Kentucky;

"Secondary Recovery in Illinois," by A. H. Bell, Illinois State Geological Survey, Urbana, and

"Secondary Recovery in West Virginia," by E. T. Heck, West Virginia Geological & Economic Survey, Morgantown.

Papers dealing with rotary drilling methods in the area are of particular current interest, and will be delivered at the session on drilling and development problems. Subjects to be covered include "Combination Rotary and Cable Tool Drilling in Michigan"; "Review of Illinois Drilling Practices," and "Developments in Southwestern Michigan—1940."

During other sessions, papers will be delivered on the following subjects: "Progress in Geodynamic Prospecting for Oil and Gas Sand"; "Oriskany Developments and Practices"; "Problems Involved in Deepening Wells from the Oriskany to the Clinton Sands in West Virginia"; "Pumping Equipment and Practices in New Illinois Pools"; "Natural Gas Dehydration Units for Individual Wells"; "Legal Considerations in Connection with the Natural Gas Business"; "Plastics from Petroleum Hydrocarbons," and "Underground Well Surveying, Directed Drilling, Side-Wall Sampling and Polar Core Orientation."

Officers and Committees

J. J. Schmidt, The East Ohio Gas Company, Cleveland, is chairman of the Eastern District. Other officers are M. G. Gulley, Gulf Oil Corporation, Pittsburgh; I. W. Hartman, Gordon Oil Company, Mt. Pleasant, Michigan; O. W. Van Petten, Columbian Carbon Company, Charleston, West Virginia, and W. A. Watkins, The Carter Oil Company, Mattoon, Illinois, vice chairman, and W. E. Ferguson, The Ohio Fuel Gas Company, Columbus, Ohio, secretary-treasurer.

O. W. VAN PATTEN
Program Committee Chairman

Van Petten heads the program committee, and is being assisted by K. C. Cottingham, The Ohio Fuel Gas Company, Columbus, Ohio; Bart DeLaat, The Pure Oil Company, Olney, Illinois; F. E. Eckert, Hanley & Bird, Bradford, Pennsylvania; F. H. Finn, Peoples Natural Gas Company, Pittsburgh; M. R. Joy, Cities Service Oil Company, Mt. Pleasant, Michigan, and R. J. Sullivan, The Carter Oil Company, Mattoon, Illinois.

Watkins is in charge of registrations.

W. F. Bowyer, Peoples Natural Gas Company, is being assisted in planning arrangements and entertainment by J. V. Goodman, Equitable Gas Company, and P. L. Kesel, Carnegie Natural Gas Company. All are of Pittsburgh.

Gulley, chairman of the publicity committee, is being assisted by Hartman and E. H. Tollefson, Hope Natural Gas Company, Clarksburg, West Virginia.

N. G. GULLEY
Vice Chairman

I. W. HARTMAN
Vice Chairman

WILLIAM A. WATKINS
Vice Chairman

W. E. FERGUSON
Secretary-Treasurer

Gasoline and Fuel Oils Taken Out of Storage

An extension of favorable statistical trends occurred in the week ended April 5, as crude production and refinery runs were moderate, resulting in desirable changes in stocks. Although it was only the first week in April, gasoline consumption increased to an extent that made necessary withdrawal of about 600,000 barrels from storage. And despite the advanced stage of the heating season, demand for light fuel oil was sufficiently large to result in withdrawal of more than 1,000,000 barrels of that product from storage. Heavy fuel oil, stocks of which are comparatively low, also was taken out of storage, about 800,000 barrels having been withdrawn.

United States crude oil production dropped sharply from 3,746,550 to 3,514,300 barrels daily for the week of April 5, the American Petroleum Institute reported, the decrease having reflected an extra shutdown day in Texas.

Crude runs to stills were lowered from 3,625,000 to 3,600,000 barrels daily, and the latter figure was only about 1 percent above the average of 3,560,000 barrels a day for March and April last year.

Production of gasoline decreased at the same time to 11,972,000 barrels for the April 5 week from 12,060,000 barrels the preceding 7 days, a decline of 88,000 barrels for the week, or about 12,000 daily.

Stocks of finished and unfinished gasoline possibly reached their peak of the year at 99,727,000 barrels on March 29, as they decreased about 600,000 barrels to 99,112,000 in the week ended April 5. At the latter level, they were about 4,500,000 barrels, or 4.4 percent, lower than at the corresponding time last year, when the total was 103,690,000 barrels.

Moreover, present stocks include nearly 2,000,000 barrels more aviation gasoline than the inventory of a year ago, a desirable situation, and stocks of ordinary gasoline are correspondingly lower than the "total gasoline" figures would indicate. Breaking the aviation fuel out of the above totals for all gasoline, it is seen that the inventory of ordinary gasoline amounted to 92,585,000 barrels on April 5, 1941, as against 98,965,000 barrels at the corresponding time last year, a reduction of 6,380,000 barrels, or 6.4 percent. But meanwhile, demand for ordinary gasoline is up more than 10 percent. The gasoline situation, therefore, is quite favorable as compared with a year ago.

Light fuel oils came out of storage in the amount of 1,125,000 barrels, having totaled 28,824,000 barrels on April 5. However, that amount was about 5,500,000 barrels, or 23.4 percent, larger than the inventory of 23,353,000 barrels on hand a year previously.

Stocks of heavy fuel oil were drawn upon to the extent of 781,000 barrels, having decreased to 95,371,000 barrels. The latter quantity was about 7,500,000 barrels (7.2 percent) smaller than the total of 102,784,000 barrels in storage April 5 last year.

Crude oil stocks totaled 266,187,000 barrels on March 29, the Bureau of Mines reported. That amount compared with 250,561,000 barrels on hand a year before, a 6.2 percent increase.

Strong Markets Generate More Price Increases

Gains in prices of crude and refined oils have been consolidated, as a 7-cent advance in Illinois crude postings finally has been adopted by some purchasers that originally posted only a 5-cent increase, while tank wagon and service station prices of gasoline have been advanced in the Southwest and on the East Coast in line with increases at the refineries.

Although some purchasers marked Illinois crude up only from $1.15 to $1.20 a barrel around April 1, The Texas Company raised its posting at that time by 7 cents, or to $1.22 a barrel; and that price subsequently has been met by The Ohio Oil Company (effective April 7), Carter Oil Company, subsidiary of Standard Oil Company of New Jersey (retroactive to April 1), Pure Oil Company (also retroactive to April 1), Mohawk Oil Lines (effective April 10), Magnolia Petroleum Company (effective April 10), and others.

The 7-cent increase for Illinois-Indiana crudes compares with a 5-cent advance for crudes in Oklahoma, Kansas, Michigan, and some other districts of the Mid-Continent; and it reflects the strong demand for the limited quantities of Illinois crude now available, following the steady decline of production of that oil.

The price advance of 5 cents a barrel throughout basin fields on April 1 was met April 3 with the same advance for fields in western Michigan. New schedules set the top price for west side crude at $1.28 and the top in the basin at $1.27.

Continued strength of the gasoline market was evidenced in the increases last week in tank-wagon and service-station prices in New York, New England, Oklahoma, Texas, and other districts. Effective April 9, Socony-Vacuum Oil Company advanced its posted prices for regular grade gasoline in tank cars throughout New York state and New England, except at terminals in western New York, ½ cent a gallon. At the same time, the company increased in like amount its dealer tank-wagon and commercial-consumer prices in the mentioned areas except where markets were depressed, in which instances increases ranged up to as much as 1 cent a gallon.

Numerous service stations in Oklahoma early last week increased their prices of gasoline by amounts ranging up to 1 cent a gallon. Continental Oil Company on April 7 increased its tank wagon prices from ½ to 1 cent a gallon throughout its marketing territory. In-

Trends of Operations and Changes in Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1938:						
November 12	3,243,250	3,180,000	273,394,000	[6]67,551,000	34,175,000	120,491,000
December 10	3,245,100	3,150,000	[6]269,509,000	68,687,000	32,068,000	118,711,000
1939:						
April 22	3,526,700	3,280,000	277,156,000	[2]87,769,000	21,085,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[2]278,607,000	86,216,000	26,167,000	108,597,000
July 29	3,539,100	3,460,000	268,513,000	77,887,000	34,900,000	114,053,000
August 5	[1]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 26	[5]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
September 30	3,658,200	3,560,000	233,023,000	71,168,000	38,081,000	115,466,000
October 7	3,435,850	3,505,000	231,564,000	[6]71,152,000	38,549,000	114,397,000
October 21	3,771,550	[2]3,650,000	[2]229,127,000	72,122,000	39,358,000	115,060,000
October 28	3,498,500	3,520,000	230,453,000	72,660,000	39,562,000	114,786,000
November 25	3,818,100	3,510,000	231,811,000	75,595,000	38,527,000	112,106,000
December 30	3,545,000	3,445,000	237,742,000	80,985,000	34,184,000	106,680,000
1940:						
January 27	3,611,600	3,470,000	237,339,000	87,914,000	27,407,000	103,015,000
February 24	3,732,100	3,490,000	240,836,000	96,719,000	25,390,000	103,419,000
March 30	3,841,250	3,585,000	250,561,000	101,370,000	23,778,000	105,081,000
April 20	3,858,550	3,535,000	254,881,000	[1]102,817,000	24,779,000	103,323,000
April 27	3,845,250	3,555,000	256,670,000	102,452,000	24,997,000	102,552,000
May 25	3,835,650	3,580,000	259,330,000	100,297,000	28,356,000	104,015,000
June 22	3,846,450	[3]3,690,000	260,891,000	97,276,000	32,751,000	104,683,000
June 29	3,639,550	3,625,000	262,059,000	95,142,000	33,590,000	104,486,000
July 27	3,690,400	3,555,000	262,579,000	90,173,000	38,981,000	105,924,000
August 31	3,501,350	3,575,000	265,865,000	85,393,000	44,766,000	108,774,000
September 28	3,799,950	3,600,000	263,609,000	82,273,000	47,986,000	108,450,000
October 26	3,640,300	3,565,000	262,746,000	80,891,000	[4]48,893,000	108,475,000
November 9	3,584,200	3,510,000	261,631,000	[6]79,847,000	48,408,000	107,687,000
November 30	3,335,050	3,510,000	262,679,000	80,284,000	46,212,000	106,618,000
December 28	3,385,500	3,585,000	261,552,000	83,274,000	42,266,000	102,620,000
1941:						
January 25	3,599,100	3,625,000	260,093,000	88,762,000	39,039,000	100,297,000
February 22	3,629,650	3,590,000	261,783,000	95,812,000	34,381,000	98,631,000
March 1	3,632,250	3,585,000	263,176,000	96,917,000	33,725,000	97,510,000
March 8	3,633,450	3,505,000	264,001,000	97,178,000	32,429,000	97,372,000
March 15	3,662,450	3,550,000	264,304,000	98,979,000	31,643,000	96,661,000
March 22	3,681,050	3,655,000	263,857,000	99,541,000	30,595,000	95,589,000
March 29	3,746,550	3,625,000	266,187,000	99,727,000	29,949,000	96,152,000
April 5, 1941	3,514,300	3,600,000	.....	99,112,000	28,824,000	95,371,000
April 5, 1940	3,745,000	[8]3,560,000	[4]250,561,000	103,690,000	23,353,000	102,784,000
Change in past year	—6.2%	+1.1%	+6.2%	—4.4%	+23.4%	—7.2%

[1] All time peak. [2] Peak for year. [3] Lowest since April, 1922. [4] Stocks, March 30, 1940.
[5] Lowest since October, 1922, due to shut down of six mid-continent states. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California.
[8] March-April, 1940 daily average.

creases of a full cent were made by that company in Oklahoma City, Tulsa, Norman, Edmond, Skiatook, Collinsville, and Okmulgee, Oklahoma, where subnormal prices had prevailed for nearly three years. Previously, Magnolia Petroleum Company had advanced its tank-wagon prices ½ cent in Oklahoma except in Oklahoma City and Tulsa. Other companies that last week posted increases in Oklahoma included Sinclair Refining Company, and Mid-Continent Petroleum Corporation.

Continental Oil Company's revisions included increases of 1 cent a gallon in Utah, Idaho, Colorado, and Wyoming, and ½ to 1 cent in New Mexico. The company is a large marketer in the Rocky Mountain region, where it is regarded as a leader in determining prices.

Gulf Oil Corporation on April 8 advanced its tank-wagon price of gasoline ½ cent a gallon in the Houston area, and a like increase was posted subsequently by Shell Oil Company, Humble Oil & Refining Company, and others.

Standard Oil Company of Ohio advanced its tank-car price of 72-74-octane gasoline in Ohio ⅛ cent a gallon effective April 8 and ⅛ cent more April 9.

In the refining districts of the Mid-Continent, Gulf Coast, and Middle West, the markets for gasoline continued strong, following recent advances of prices, and some additional increases in quotations were made. Shipments against contracts were reported heavy in the Oklahoma-Kansas region and also in the Chicago area. Early in the past

Wholesale Prices of Refined Products in Principal Markets

	Range Last week (Cents a gal.)		Changes from week Before	
REFINED GASOLINE				
Oklahoma Refineries:				
60 Octane and under	4⅛	4⅛	+⅜	+¼
63-66 Octane	4⅛	4⅞	+¼	+⅛
72-74 Octane	4⅞	5¼	+⅛	+¼
Mid-Western Tank Car:				
60 Octane and under	4	4⅛	+⅛	+¼
63-66 Octane	4⅜	4⅞	...	+⅛
72-74 Octane	4⅞	5¼	+½	+⅛
New York Harbor:				
68-70 Octane	6¼	6¼	+¼	+¼
72-74 Octane	6¼	6½	+¼	...
Gulf Coast:				
60 Octane unleaded	4¾	4¾	+⅛	...
65 Octane unleaded	5	5	+¼	...
72-74 Octane leaded	5⅛	5⅛	+⅛	...
NATURAL GASOLINE				
Grade 26-70:				
F.O.B. Group 3	2⅞	2⅞	...	...
F.O.B. Breckenr'ge, Tex.	2½	2½	...	...
KEROSENE				
Oklahoma Refineries:				
41-43 water white	4	4⅛	—⅛	+⅛
42-44 water white	4¼	4⅝	...	⅛
Mid-Western Tank Car:				
41-43 water white	4⅛	4½	...	+⅛
42-44 water white	4⅛	4⅝	...	+⅛
New York Harbor	4⅞	4⅞	...	...
RANGE OIL				
At Oklahoma Refineries	3⅞	4⅛	...	...
In Mid-Western Market, Group 3, basis	3⅞	3⅞	...	...
LIGHT FUEL OILS				
Oklahoma Refineries:				
No. 1 straw	3¾	3¾	...	...
No. 3	3¼	3⅜	...	...
Mid-Western Tank Car:				
No. 1 white	3¾	3⅞	...	...
No. 3	3⅛	3⅜	...	...
New York Harbor:				
No. 1	4⅞	4⅞	...	...
No. 3	4¼	4¼	...	...

	Range Last week (Per Bbl.)		Changes from week Before	
HEAVY FUEL OILS				
Oklahoma Refineries:				
No. 6	$0.70	$0.70	...	...
Mid-Western Tank Car:				
No. 5	.75	.85	...	...
No. 6	.65	.70	...	...
New York Harbor:				
No. 5	1.55	1.55	...	...
No. 6	1.25	1.25	...	...
BUNKER C FUEL OIL				
(Per barrel, ships' bunkers)				
Gulf Coast	$ .80	$ .90	...	...
New York Harbor	1.25	1.25	...	...
DIESEL OIL				
(Per barrel, ships' bunkers)				
Gulf Coast	$1.35	$1.50	...	...
New York Harbor	1.75	1.75	...	...
Los Angeles Basin, 27 gravity	1.15	1.20	—.05	—.05
LUBRICATING OIL				
(Cents a gal.)				
Oklahoma Refineries:				
Bright Stock, 150-160 viscosity at 210°, 10-25 pour test	14	15½	+1	...
Neutral oil, ale No. 3 color, 150 viscosity at 100°, 0-10 pour test	8	10¼	...	...
Western Pennsylvania:				
Bright Stock, 145-155 viscosity at 210°, 25 pour test	15	15½	...	...
Neutral Oil No. 3 color, 150 viscosity at 70°, 25 pour test	23	24	+2	+2

Production Rise Reflects Fewer East Texas Shutdowns

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (April)	State Allowable (Barrels Daily in April)	BARRELS DAILY FOR WEEK ENDED April 5	April 12
TEXAS—				
Texas Panhandle	.....	.....	71,200	80,500
North Texas	.....	.....	98,800	98,900
West Central Texas	.....	.....	30,300	30,500
West Texas	.....	.....	208,500	210,300
East Central Texas	.....	.....	75,700	75,100
East Texas Field	.....	.....	297,400	375,200
South Texas	.....	.....	190,300	174,700
Texas Gulf Coast	.....	.....	230,200	234,600
Total Texas	1,355,300	1,325,291§	1,202,400	1,279,800
CALIFORNIA—				
Long Beach	.....	.....	41,300	42,500
Midway-Sunset	.....	.....	48,000	53,200
Kettleman Hills	.....	.....	37,800	38,700
Wilmington	.....	.....	83,500	83,500
Others	.....	.....	396,700	412,800
Total California	596,300	571,500*	607,300	630,700
OKLAHOMA—				
Oklahoma City	.....	.....	102,350	79,750
Seminole Area	.....	.....	103,100	109,850
Others	.....	.....	207,425	218,800
Total Oklahoma	429,300	400,000	412,875	408,400
ILLINOIS—				
Salem	.....	.....	102,100	98,000
Louden	.....	.....	65,000	65,000
Centralia	.....	.....	11,600	11,900
Other New Pools	.....	.....	137,200	135,100
Old Pools	.....	.....	10,600	10,700
Total Illinois	336,000	.....	326,500	320,700

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (April)	State Allowable (Barrels Daily in April)	BARRELS DAILY FOR WEEK ENDED April 5	April 12
LOUISIANA—				
North Louisiana	.....	.....	70,500	70,500
South Louisiana	.....	.....	235,500	232,800
Total Louisiana	299,700	300,893	306,000	303,300
KANSAS	200,700	210,700	209,850	206,950
NEW MEXICO	109,000	110,000	109,500	109,400
EASTERN STATES—				
Pennsylvania Grade	49,000	.....	72,500	72,600
Others, Eastern	51,700	.....	19,800	19,500
Total Eastern States	100,700	.....	92,300	92,100
MOUNTAIN STATES—				
Wyoming	88,700	.....	75,400	75,800
Montana	21,300	.....	18,300	19,200
Colorado	4,300	.....	3,800	3,900
Total Mountain States	114,300	.....	97,500	98,900
MICHIGAN	44,000	38,000†	37,800	37,400
INDIANA	23,700	.....	19,900	19,200
ARKANSAS	75,700	72,024	72,800	71,500
MISSISSIPPI	20,300	.....	19,800	18,100
NEBRASKA	4,300	.....	4,350	4,300
‡Total 8 Prorated States	3,110,000	3,028,408	2,958,525	3,047,450
Total United States	3,709,300	.....	3,518,875	3,600,750

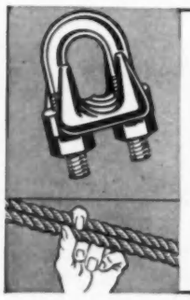
* Recommendation of Conservation Committee of California Oil Producers.
† Estimate of actual production under prescribed regulations, which do not fix a definite state total allowable.
‡ Texas, California, Oklahoma, Louisiana, Kansas, New Mexico, Arkansas, Michigan.
§ Texas Railroad Commission's estimate of actual net daily production allowing for usual under-production of 3½ percent under net allowable, which at the beginning of April is calculated at 1,373,359 barrels daily. However, allowable normally increases as new wells are completed. Under April order, most Texas fields were ordered shut down April 5, 6, 9, 12, 13, 19, 20, 26, 27, and 30. Texas Panhandle was ordered shut down April 6, 13, 26, 30. East Texas exempt on April 9.

WHICH MAN WOULD YOU HIRE?

Fauntleroy is on the spot. That U-Bolt Clip of his spoils the rope, breaks it and causes costly delays and accidents. Would you put Fauntleroy to work for you with his U-Bolt Clip?

Spike says, "This Laughlin Safety Clip takes a real fist grip on wire rope! Sure it saves time and money. It's safer, easier to put on, and can't be put on backwards!"

WIRE ROPE USERS! HERE'S THE WAY TO INCREASE YOUR PROFITS!



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week, refiners in Oklahoma generally advanced their prices of all grades of gasoline ⅛ cent a gallon on the average, some plant owners having posted increases of as much as ½ cent.

Tank car and barge prices of all grades of gasoline meanwhile were advanced ¼ cent a gallon by suppliers at New York.

On the Gulf Coast, minimum prices of gasoline were ⅛ to ¼ cent a gallon higher than previously.

Other products as well as gasoline continued in strong demand at higher prices, in the refining districts and the marketing areas.

Kerosene was marked up in the Middle Western region, on the Gulf Coast (⅛ cent a gallon), and on the Atlantic Coast. Secony-Vacuum Oil Company effective April 9 advanced its prices for kerosene, all methods of delivery, by 2/10 of a cent a gallon throughout Maine, New Hampshire, Massachusetts, and Rhode Island. At the same time the company posted an advance of 1/10 cent for kerosene in Vermont, Connecticut and in an area in New York state east of Tupper Lake, Fort Plain, and Stamford, excluding New York City and environs. This company on April 9 also advanced most of its posted prices for No. 2 and No. 3 fuel oils, all methods of delivery, throughout New England, New York City, and eastern New York state 3/10 cent a gallon, while increasing those oils 2/10 cent in New York state west of Tupper Lake, Fort Plain, and Stamford.

Lubricants showed pronounced strength at Mid-Continent and western Pennsylvania refineries.

Crude Oil Output Within Demand Despite Increase

United States crude oil production showed a rather sharp increase of 81,875 barrels in averaging 3,600,750 barrels daily for the week ended April 12, the output having been 3,518,875 barrels daily in the previous week. The new rate was, however, 108,550 barrels under the average daily market demand for domestic crude in April, as estimated by the Bureau of Mines.

The increase of the week was accounted for largely by the fact that the East Texas field was shut down only 2 days, as against 3 the previous week. The big field was closed on April 6 and April 12, but was exempt from the shutdown of the rest of the state on April 9. Consequently, East Texas output on a daily average basis increased from 297,400 to 375,200 barrels and Texas production rose from 1,202,400 to 1,279,800 barrels daily. However, Texas still was producing below its indicated daily average for April, because of the 3 shutdowns for the week outside the East Texas field. And for the week ending April 19, with only 2 shutdowns over the state scheduled, a sharp increase in output is due to occur. It is indicated, nevertheless, that Texas for the month as a whole will produce approximately in conformity with market demand.

California last week rose from 607,300 to 630,700 barrels daily, but that increase was approximately compensated by decreases in Oklahoma from 412,875 to 408,400, in Illinois from 326,500 to 320,700, in Kansas from 209,850 to 206,950 barrels, in Louisiana from 306,000 to 303,300 barrels, and in several other states by small declines.

WORLD-WIDE DEVELOPMENTS

State Department Issues Unlimited Licenses to British

Unlimited licenses have been issued by the State Department to the British Purchasing Commission authorizing exportation of oil and gas equipment and parts, drilling machinery and parts, and refining equipment. Areas for which these licenses have been issued are:

Aden, Anglo-Egyptian Sudan, Australia, Bahamas, Barbados, British Guiana, British Honduras, Burma, Ceylon, Egypt, Federated Malay States, Gold Coast, Great Britain, Hongkong, India, Ireland, Jamaica, Kenya, Leeward Islands, New Foundland, New Guinea, New Zealand, Nigeria, Northern Rhodesia, Palestine, South West Africa, Southern Rhodesia, Straits Settlements, Tanganyika Territory, Trinidad, Union of South Africa and Windward Islands.

Extend Export Control to Additional Oil Equipment

Recent instructions issued to customs collectors by the Division of Controls of the State Department, list the following equipment, used in drilling and refining, as requiring licenses for exportation from the United States:

Magnetometers, mercury pumps, manometers, pressures viscosimeters, liquid level recording gauges, gravity meters, electrical well logging and gun perforating equipment, subsurface pressure bombs, Pirani gauges, thermo-regulators, drill press tables and drill presses.

The instructions declare, "However, miscellaneous electrical and radio equipment, which items could be used in connection with the operations of the above-mentioned articles, are subject to license requirements only when used or adapted for use in aircraft."

Drilling, production and refining eqiupment has been subject to individual export licenses since February 10.

British Oil Interests May Be Threatened by Iraq Change

London reports indicate that the British are suspicious that the political coup which occurred two weeks ago in Baghdad, Iraq, may threaten the important British oil interests in that Middle Eastern country. London sources charge Axis influences with having instigated the coup in the Iraq capital, which resulted in the overthrow of Premier Taha al-Hashimi and the seizure of power by anti-British Rashid Ali Beg Gailani, former premier.

An official communique of the new regime declared soon after the coup that Iraq friendship with Great Britain would not be disturbed. However, Prince Regent Abdul Ilah, uncle of 5-year-old King Feisal, is reported in a recent broadcast from Basra to have denounced the new government as a tool of foreign, anti-British influences.

When the late king of Iraq, father of the present young king, was killed in an accident in Switzerland some time ago, reports were spread in Iraq that he had been killed by the English, and riots ensued. The Iraq representative in Berlin adopted an anti-British attitude, for which he lost his job and his property in Iraq. Whether or not this former ambassador to Germany has had anything to do with the recent change in government has not been made public.

British comment in London has indicated concern for the British oil concessions in the Iraq fields, where Iraq Petroleum Company directs operations. Production in the country last year was over 20,000,000 barrels. Since the beginning of the war, a large part of the oil has been going to the Haifa, Palestine, refinery of Consolidated Refineries, Ltd., having a daily throughput of about 40,000 barrels of crude.

Petroleos Mexicanos Report New 12,000-Barrel Well

Petroleos Mexicanos, the Mexican government oil company, is quoted in the Mexico City press as reporting a 12,000-barrel well in the Poza Rica field. The well, Escalin 1, is reported producing from 7467 feet. No confirmation had been secured.

New Well Indicated South of San Joaquin Area

Mene Grande Oil Company's Santa Ana 3, Eastern Venezuela, 12 kilometers southwest of the San Joaquin area, during a series of four-hour tests through perforations at 8320-8335 feet in the upper Periquito sand, produced 33.8-gravity oil at the daily rates of 666, 1236 and 1722 barrels through ¼-, ⅜-, and ½-inch chokes, respectively. The gas/oil ratio was under 900/1 in each test period. The test was temporarily closed in. The company has resumed drilling below 2800 feet in Quiamare 1, wildcat ten miles east of the Mene Grande pipe line to Puerta la Cruz. This test was temporarily suspended while obtaining a new water supply.

The Texas Company of Venezuela, having perforated without success at 8695-8985 feet in Rincon Largo 1, Santa Ana structure, is planning to perforate higher up the hole. S. A. Las Mercedes was drilling Mercedes 1, state of Guarico, through shale at 5529 feet about two weeks ago.

In the San Joaquin area, Socony-Vacuum Oil Company was below 6500 feet in Guario 3, and was coring shale below 3825 feet in Guario 4. The company was drilling below 8901 feet in Anaco 1, wildcat in the Roble area, the first week in April, after topping a thin oil sand at 8560 feet. In Anzoategui state, the company was coring Panchita 1, wildcat in the Temblador, below 3276 feet.

Report Progress of Three Scattered Wildcats

In Argentina, Ultramar S.A.P.A. was drilling sandstone in Saladillo 2, Jujuy province, at 3815 feet about two weeks ago. The company's Cerro Lumbreras 1, in the province of Salta, was down about 600 feet and preparing to run 16-inch casing to bottom. Ultramar's Piedra Clavada 1, in the southern province of Santa Cruz, was down 2745 feet; hard conglomerate with gas was encountered. All tests are wildcats.

War Conditions Hindering Saudi Arabia Development

A hint of progress in Saudi Arabia operations is contained in the annual report of Standard Oil Company of California. H. D. Collier, company president, declared:

"California Arabian Standard Oil Company, in which the company has a 50 percent interest, continued the development of its properties in Saudi Arabia. Results obtained from exploratory and development work have proven very satisfactory. However, the war has caused a shortage of tankers and the closing of many markets otherwise available. This situation has retarded the normal progress of the company.

Collier added that the company's earnings were used to help finance continued development. Since the outset of the war, little information on operations in Saudi Arabia has been available.

More Than Half of Gas In Turner Valley Burned

More than half of the gas produced in Turner Valley field of Alberta, Canada, in mid-winter was burned in waste gas flares or blown to the air, according to the Petroleum & Natural Gas Conservation Board.

In January, 138 oil wells in the field produced 2,867,732,000 feet of gas, and 72 gas wells produced 1,995,989,000 feet, making a total of 4,863,721,000 feet of gas.

In the same month, 2,655,537,000 feet of gas was burned in flares or blown to the air. The remainder was used to meet demands of gas consumers in Calgary and other Alberta communities, and to provide fuel for field operations.

Barco Concession Wildcat Drilling Below 8000 Feet

Colombian Petroleum Company was drilling below 8000 feet in Socuavo 1 on the Barco concession in Colombia three weeks ago. Coring at the 7910-7977-foot level in shale and limestone revealed no shows. The company was rigging up Tres Bocas 2, on the same concession, and was grading and surfacing road to South Sardinata 1, wildcat a few miles west of the Petrolia field.

Colombia Wildcats

Shell Oil Company of Colombia has spudded in a test on the Casaba property immediately across the Magdalena River front at Barrancabermeja. It is 15 miles in a straight line from the Infantas field on the DeMares Concession.

The Tropical Oil Company is rigging up for a test for a wildcat well just south of this property on the Gutierrez Concession.

Socony-Vacuum Oil Company is also planning to drill another wildcat in this general vicinity.

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U. S. FIELD OPERATIONS

Illinois-Indiana

Shelby County Promised an Aux Vases Oil Pool

A Shelby County wildcat west of Lake Wood, Hinkle & Sloan's Harrison 1, NE SE 12-10n-2e, Cold Springs township, cemented casing to the Aux Vases after recovering eight feet of saturation in a core at 1725-34 feet. There is no important production in the county.

In the recently discovered New Haven field of White County, it appeared probable that the Hardinsburg and Cypress sands will be added as productive horizons. Benedum Trees' (Hiawatha Oil Company) Stinson 3, SE SE NW 19-7s-11e, swabbed 3½ barrels an hour from the Hardinsburg from 2255 feet after a 10-quart shot. The test was dry in the Tar Springs, the formation where three producers have been completed. The same operators' Vail 2, NE NW SE 19-7s-11e, dry in both the Tar Springs and Hardinsburg, cemented pipe to two feet of excellent Cypress saturation at 2449-51. Total depth is 2451 feet.

First Devonian test in the McKinley field of Washington County, Joe Murphy's Fee 2, NW NW NE 29-3s-4w, was showing for a 50-barrel producer from 2271 feet following a small acid treatment. Earlier, the test swabbed ½ barrel an hour. Only other production in the field is from Benoist sand, dry at Fee 2. There is only one other area in Illinois where there is Devonian production from wells dry in shallower formations, the Bartelso pool, Clinton County, where a dozen producers were completed successfully in the Devonian after the Cypress and other shallow sands, productive in parts of the pool, shaled out.

Two important Clinton County wildcats were started: Three miles southwest of Bartelso, Slayton-Strawser-Venuto's Ben Winkeler 1, NW SW 25-1n-4w, was repairing pump at 840 feet. Three miles southwest of Keyesport, Campbell et al's Sarah Baum 1, NE SE NE 21-3n-2w, was spuded. Near the recently opened one-producer field at Posey, also in Clinton County, Union Pipeline Company's Twenhafel 1, SE SW SE 8-1n-2w, Shell Oil Company farmout, was shut down at 750 feet to reset surface pipe. The discovery well of the area, J. F. Ashoff's Lampen 1, was completed as a light Cypress producer at 1105-08 feet.

Degonia May Produce

Phillips Petroleum Company's Gar 3, SW NW NW 36-4s-10e, in the Phillips pool two miles southwest of Phillipstown, White County, was testing a show of oil in the Degonia sand, in the top of the Chester series, at 1995-2007 feet. If successfully completed, it will be the first to produce from the formation in Illinois.

L. Severns et al's Ging 1, Clay County wildcat near Iola, Section 15-5n-5e, was attempting to reduce water after drilling out plug to test Aux Vases saturation. Total depth is 2397 feet.

Highlight of the week in Marion County was sale of the famed Kalkbrenner strip in the Lake Centralia-Salem field, Section 5-1n-2e, to The Texas Company. The purchase price was reported to be $170,000, and former owners were A. N. Cornwell and others. The roadway, a half mile long, is seven feet wide at the south end and 20 feet wide at the north. There are 14 producing wells on the strip bottomed in five horizons, the Bethel, Aux Vases, McClosky, Salem and Devonian. For every well on the strip, The Texas Company had drilled at least two offsets, or 53 producers in an area a half mile long and only 60 feet wide. Although the purchase price was small compared with that paid for other small tracts during the pool's early development, there have been nearly 1,250,000 barrels of oil taken from wells on the strip. The oil had a sale value of approximately $1,250,000. The Texas Company and former owners of the strip have been involved in litigation for some time. The Texas Company sought official sanction from the courts for a directional survey to determine whether wells on the strip were bottomed under adjoining acreage to which The Texas Company holds the lease. The company also had asked for an accounting of oil already taken from the lease. It is assumed that all litiga- involving the strip has been dropped, concurrently with purchase of the property by The Texas Company.

There were 29 Trenton operations in the pool, all former Devonian producers being deepened with cable tools. The north outpost to Trenton production, Ladd Oil Company's Young's Church 4, Section 21-2n-2e, was showing for a small producer at 4665 feet, and was to be put on pump. It was estimated the well would make from 50 to 100 barrels a day.

In Hamilton County, The Texas Company was attempting to complete a McClosky producer in the Hoodville pool, where production at present is limited to Benoist and Aux Vases sands. The test, Flint 1, NE SW SW 3-6s-6e, cored pay at 3179-85 feet in McClosky after finding shallower formations dry. The discovery of the field, Kingwood Oil Company's Morris 1, was originally a McClosky producer, but when subsequent development proved the Benoist was more lucrative, the test was plugged back. A Hamilton County wildcat 11 miles from production, E. S. Adkins' Federal Coke & Chemical Company 1, NW NW SE 17-7s-6e, was below 3200 feet, shut down for a fishing job.

The Benton field in Franklin County was extended 1½ miles south with near completion of W. O. Morgan's Minier 1, NW NW NE 36-6s-2e, which flowed 83 barrels in 2½ hours from the Tar Springs, topped at 2116 feet. Morgan was drilling below surface pipe for Minier 2, an east offset, and has staked two other locations on the lease.

Near the town of O'Fallon in St. Clair County, A. Wiggins' V. Rasp 1, NW NE SW 32-2n-7e, was drilling with rotary tools at 102 feet, the first venture in that vicinity.

Hayes-Brown's Lew Seiler 1, SW SE NW 30-1s-12w, Wabash County, a mile southwest of Mt. Carmel, was given a second acid treatment in the McClosky. Following the first treatment of 500 gallons, the well showed free oil. Many observers believe the venture has tapped a structure separate from the Mt. Carmel field, which is productive in the Biehl, Cypress and McClosky.

Posey Wildcat Indicates Pool on Drill-Stem Test

Gulf Refining Company's William Fred Schreiber 1, SE NE SE 23-6s-13w, Posey County wildcat in Black Township, near Buffin, showed 60 feet of oil and 60 feet of oil-cut mud with no water in a one-hour drill-stem test, for a possible new Cypress sand pool. Of Cypress core from 2476-83 feet, seven feet of saturation was recovered.

Drilling at 400 feet in Vanderburgh County, five miles west of Evansville, was Illind Oil Company's Fredericka Hendricks 1, SE SW SE 31-6s-11w, just 1200 feet northwest of T. W. Drake's Nurrenbern 1, new Mansfield sand discovery. L. J. Palmer is contractor.

Abandoned was a northeast outpost to Heusler Dome field production, across the Posey County line into Vanderburgh County, Williams-Hamilton-Stuart et al's Strueh Heirs 1, SW SW NW 6-7s-11w, Sun Oil Company farmout. Bottomed at 1833 feet, it is an east offset to Harris-Stuart's Weldon-Strueh 2, Tar Springs producer.

Drilling at 2200 feet with no shows reported was a Knox County wildcat three miles northeast of Mt. Carmel, Illinois, S. C. Yingling's Mable Schneck, SE SW NE 10-1n-12w. Starting at surface elevation of 400 feet, Glen Dean was topped at 1784 feet, and Cypress at 1977 feet.

Spudding was a new wildcat start in Pike County, near Iva, Jefferson Township, Southwestern Development Company's Doads 1, SE SE SW 19-1n-6w.

Abandoned after unsuccessful test of Tar Springs was Ed Holmans' E. B. Mumford 2, NE NW NE 6-4s-13w, northeast of Griffin, Posey County. Hole was bottomed at 2148 feet.

In western Gibson County, between the Griffin field and production in White County, Illinois, across the Wabash River, W. C. McBride, Inc.'s Jesse Blood 1, SE SE NE 28-3s-14w, was drilling for the McClosky after drill-stem test in Aux Vases at 2776-91 feet showed 30 feet of oil and gas-cut mud. It is a Gulf Refining Company farmout. Starting at surface elevation of 377 feet, Bethel was topped at 2674 feet, and core at 2586-96 included 7½ feet saturated sand and shale.

R. L. Bauman's Ritter 1, SW SW SE 9-8s-14w, attempted half-mile north extension to Neiderst pool of Point Township, Posey County, on production test of McClosky at 2685-98 feet, swabbed 50 barrels of oil and 100 barrels of water in 48 hours. Hole is bottomed at 2698 feet.

Oklahoma-Kansas

Pottawatomie County Wildcat Promises New Oil Pool

Hall-Jordan Oil Company may open a new producing area in Pottawatomie County at Whitehead 1, C W½ SE SW 36-10n-3e, two miles south of Shawnee and same distance north of Tecumseh. Wilcox sand was topped at 5234 feet, and core recovery at 5326-45 feet showed nine feet of stained sand with good odor. Core tested 16 percent saturation and 16.5 percent porosity. Seven-inch casing will be set above sand on electric log showing. Belle City was topped at 2600 feet, Hogshooter 3055 feet, Checkerboard 3440 feet, sand 4333-62 feet, Hunton lime 5008 feet, Sylvan 5015 feet, Viola 5117 feet, and Simpson dolomite 5195 feet. The Ohio Oil Company has the west offset, and Phillips Petroleum Company controls the south offset. Other companies with close-in holdings include Gulf Oil Corporation, Stanolind Oil & Gas Company, Sinclair-Prairie Oil Company, Tide Water Associated Oil Company, Magnolia Petroleum Company, Amerada Petroleum Corporation and Mid-Continent Petroleum Corporation. H. G. Marshall, Oklahoma City, is the drilling contractor.

Hall-Jordan Oil Company's Swan 1, SE NE NW 29-6n-5e, wildcat southeast of Gray pool, Pottawatomie County, logged Wilcox sand structurally high around 3785 feet, and cored to below 3808 feet for several good oil shows. Previously, this test passed up saturated Earlsboro sand at 2640-60 feet to seek the deep pay.

Five miles east of Okemah, Okfuskee County, Alma Oil Company, W. C. Kite and Watchorn Oil & Gas Company have opened a new gas pool at Replogle 1, NW SW NW 14-11n-10e. Cromwell sand was logged at 3171 feet and cored to 3178 feet, recovering 8½ feet of lime, two feet of sandy lime with odor and five feet of stained sand. After running electric log, 5½-inch casing was cemented at 3160 feet. When plugs were knocked out, the wildcat showed 3,000,000 feet of gas. Operators were cleaning out to deepen in Cromwell. Carl B. King Drilling Company et al staked Williams 1, NE NW SW 16-12n-10e, on a northeast-southwest trend between Keaton and Cary pools, Okfuskee County. Contract is Wilcox sand, or 3800 feet. Interested in the 720-acre lease block are F. E. Weimer, Kirk S. White, Harry Wirick, Selby Oil Company and Margay Oil Corporation.

One wildcat was testing and another was abandoned in Payne County. Gardner Petroleum Company's Lowry 2, C N½ SE SW 12-19n-1w, four miles east of Orlando and north offset to an abandoned producer, topped Mississippi lime at 4640 feet, Misener at 4720 feet for a show of oil. Drill-stem test failed at 4738 feet. Core at 4738-47 feet showed spotted oil saturation. Another drill-stem test will be attempted. J. E. Crosbie et al's Hogle 1, SEc SW 29-20n-2e, five miles north of West Stillwater pool, had Wilcox sand at 4768-85 feet for salt water, and deepened to second sand at 4832-40 feet for more water. Hole was abandoned.

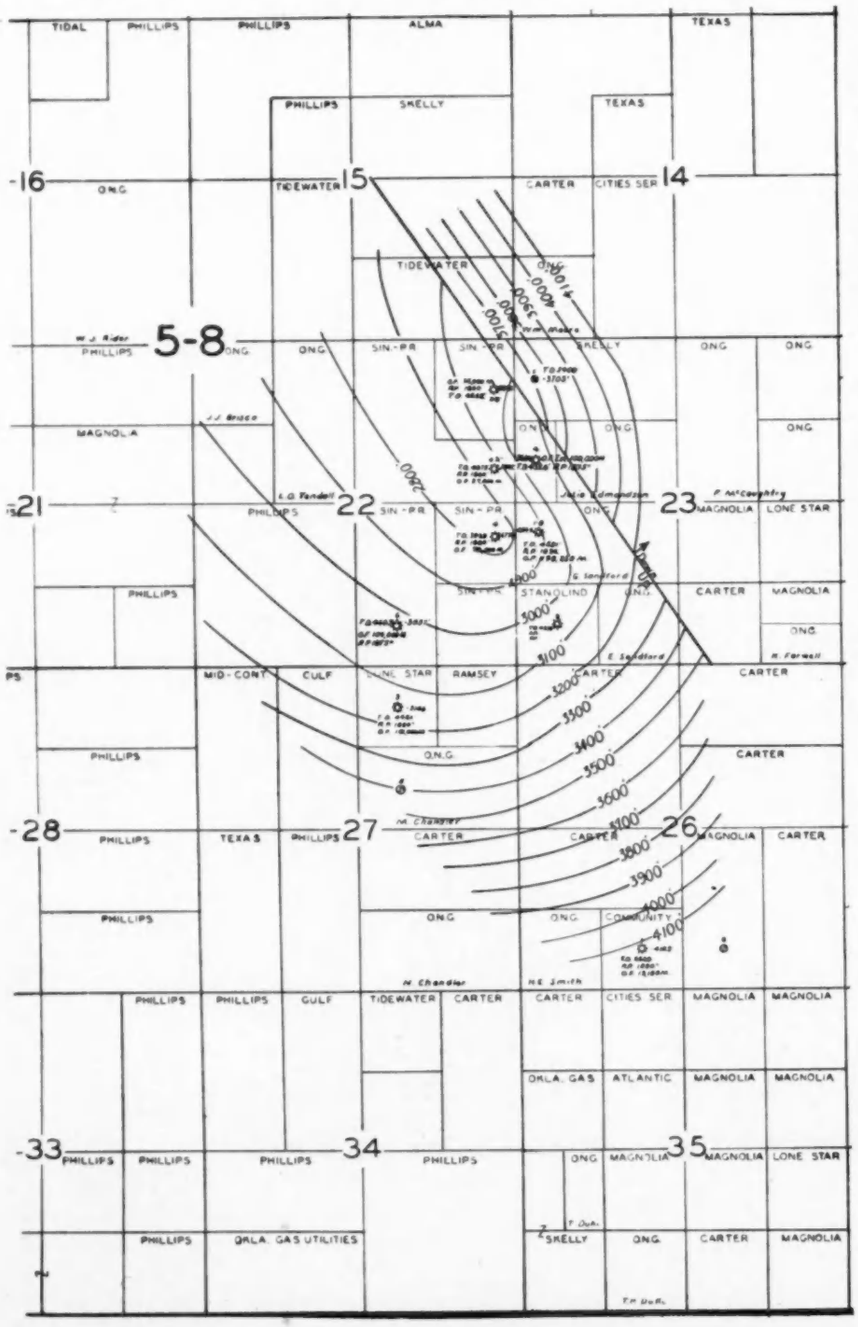
Charlson Sand Big Reserve In Chickasha Gas Field

Deep Charlson sand development in the old Chickasha gas field, Grady County, Oklahoma, has opened a major gas reserve with promising oil possibilities.

Nine deep producers have been completed in the Charlson sand of the Deese series for a combined open flow of 907,880,000 cubic feet per day, or an average of approximately 100,000,000 cubic feet per well. On the 4500-foot contour, the Charlson sand reserve is estimated at 82,000,000,000 cubic feet. This involves 1520 productive acres, 42-foot average sand thickness, 22 percent porosity, well-head pressure of 1860 pounds per square inch and abandonment pressure of 100 pounds.

Since its discovery in 1922, the Chickasha gas field has produced over 90,000,000,000 cubic feet of gas from shallower sands, that are now estimated to have a reserve of 30,000,000,000 cubic feet. Six horizons produce gas and three sands are productive of low-gravity oil. Discovery of Charlson sand gas production thus means that the field should produce as much in the future as it has in nearly 20 years.

During 1938, 17 leaseholders communitized a block of 2372 acres to test possible deeper sands, as the shallower zones were becoming exhausted. The Carter Oil Company was named opera-



Contour Map of Chickasha Gas Field Based on Charlson Sand

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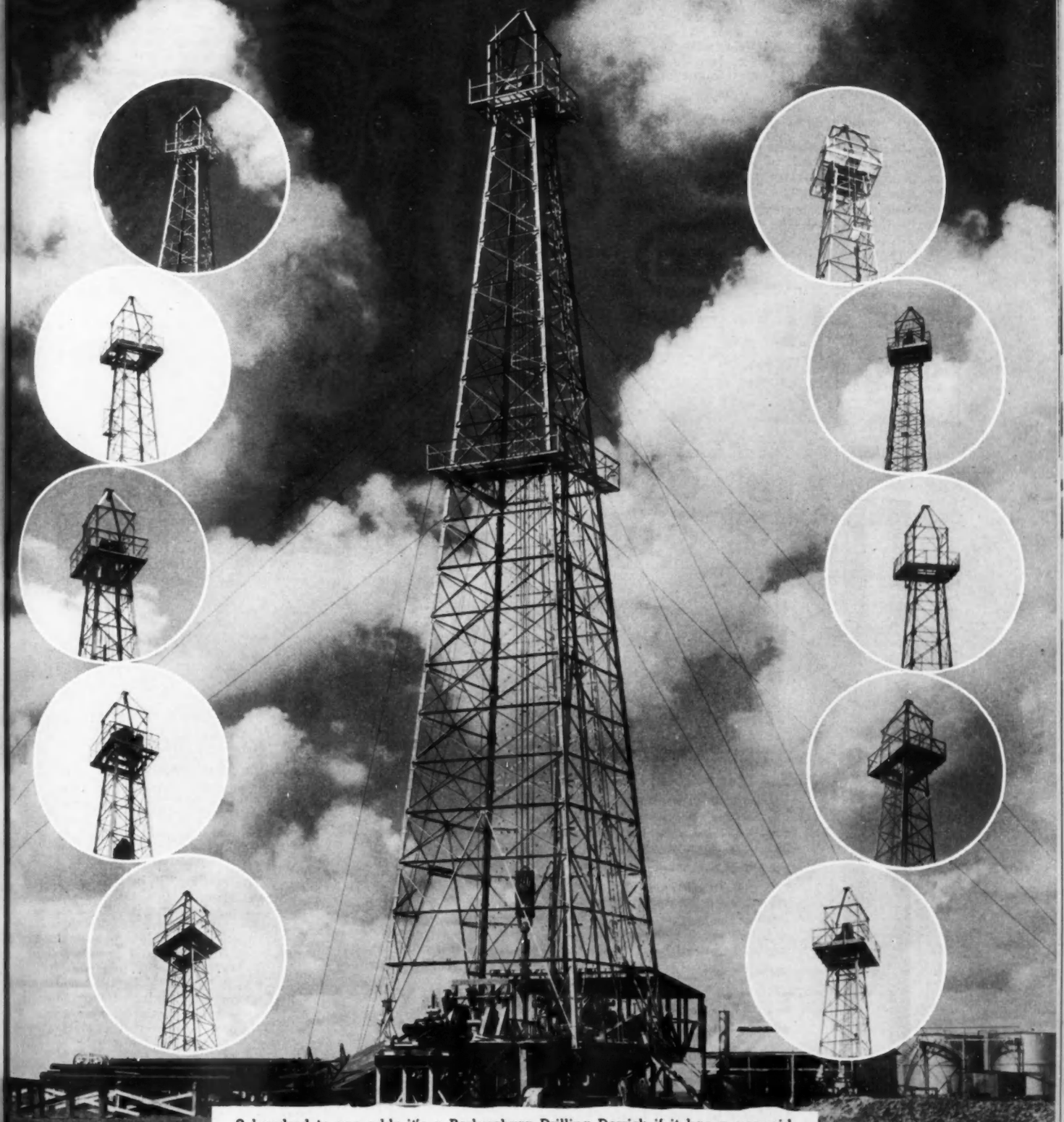

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tor, and drilled Smith 1, C SE SW 26-5n-8w. Drilling ended at 6620 feet, due to excessive formational dips; the last 100 feet was vertically down the bedding plane, strata standing at 90 degrees. Casing was perforated with 813 shots between 5330 and 6330 feet, with pay sand found at 5330-50 feet. Initial production gauge was 13,180,000 cubic feet.

E. B. NISBIT, purchasing agent and treasurer of Laminated Shim Company, has been named executive vice president of the company. Other official changes include E. R. Young, former factory manager, named vice president in charge of production, and Richard Seipt, sales manager, named vice president in charge of sales

Bowman Pool Revived by Two-Zone Oil Well

Sharon Drilling Company et al's revived the abandoned Bowman pool, Rice County, with Nevious 1, SWc NE 21-19-10w, north of Silica area. The well was producing alternately from Lansing and Arbuckle limes. Lansing was topped at 2963 feet, perforated with 30 holes at 3032-40 feet, and treated with 500 gallons of acid. A pumping potential of 530 barrels of 40.8-gravity oil daily was established. Arbuckle lime was logged at 3273½-98 feet, pay at 3296-98 feet was treated with 500 gallons of acid, packer set at 3248 feet.

In eight hours, the wildcat pumped 34 barrels to establish a gauge of 103 barrels of 42.1-gravity oil daily in the Arbuckle lime.

Schermerhorn Oil Corporation opened a new gas pool in Barton County when Merton 1, C E½ SE SW 11-19-15w, tested 8,500,000 feet of gas per day through 5½-inch casing. Hole was bottomed at 3550 feet in Basal sand. At 3535 feet, the semi-wildcat showed only 5,500,000 feet daily. The test is two miles south of Otis-Albert gas field, which also produces from Basal or Reagan sand, and northeast of abandoned Kruckenberg pool.

Ainsworth pool, Barton County, was extended west as Continental Oil Company's Stoskopf 1, SE NW SW 28-16-13w, filled 1600 feet with oil in 16 hours when plugs were drilled in Arbuckle lime at 3391-3403 feet. Operators were swabbing down for a production test. This semi-wildcat is seven-eighths mile from production. Production in Ainsworth pool is from Arbuckle and Shawnee limes.

Two wildcat discoveries established official potentials. Derby Oil Company, Crow Drilling Company et al's Miller 1, C S½ SW SW 17-13-17w, Southwest Catherine pool strike, rated 480 barrels daily on the pump from Arbuckle lime at 3645-53 feet. Stanolind Oil & Gas Company's Nagel 1, C E½ NE SW 3-24-15w, Macksville pool discovery, Stafford County, flowed 410 barrels in 24 hours from Lansing-Kansas City lime at 3830-39 feet, topped at 3632 feet with hole bottomed at 4155 feet.

W. M. McKnab, Tulsa Oil Corporation and Continental Oil Company's Miller 1, C SW NE 15-32-5e, 1¼ miles northeast of Frog Hollow oil field and east of abandoned Tisdale gas pool, Cowley County, opened a new Bartlesville sand pool. Tight sand was topped at 3028 feet, penetrated to 3112 feet. Pay was shot with 50 quarts, and the wildcat flowed and headed 100 barrels of 42-gravity oil daily. Operators were rigging up pumping unit, and it is estimated to settle to 50 barrels daily.

Outpost Revives Interest in Nebraska's Shubert Area

Activity was revived in the Shubert area, Richardson County, Nebraska, with a well a mile west of the pool. Henry J. Bollen, Trustee, Garretson & Kinsley et al's Bankers Life Insurance Company 1, C SW SW 30-3n-16e, swabbed 72 barrels of oil in six hours after treating Hunton lime at 2515-21 feet. Pay was penetrated with 500 gallons of butane, followed by 420 gallons of acid. Six-inch casing was cemented at 2515 feet after a saturated core was recovered at 2517-21 feet. When plugs were drilled to 2521 feet, hole filled 800 feet with oil in 3½ hours. Prior to acidizing, the wildcat swabbed 65 barrels in five hours. Crude is 29-gravity. This discovery topped Lansing lime at 948 feet, and Mississippi lime at 2154 feet.

Offsetting this test to the south was W. H. Martgan et al's Smith 1, C E½ NW NW 31-3n-16e, attempting a water shut off in Hunton lime, topped at 2513 feet and penetrated to 2539 feet after cementing 5½-inch casing at 2515 feet. On pumping test, 127 barrels of fluid was recovered in 65 hours, 90 percent being water. This test logged Lansing lime at 909 feet, Mississippi lime 2137 feet, and Kinderhook shale at 2270 feet.

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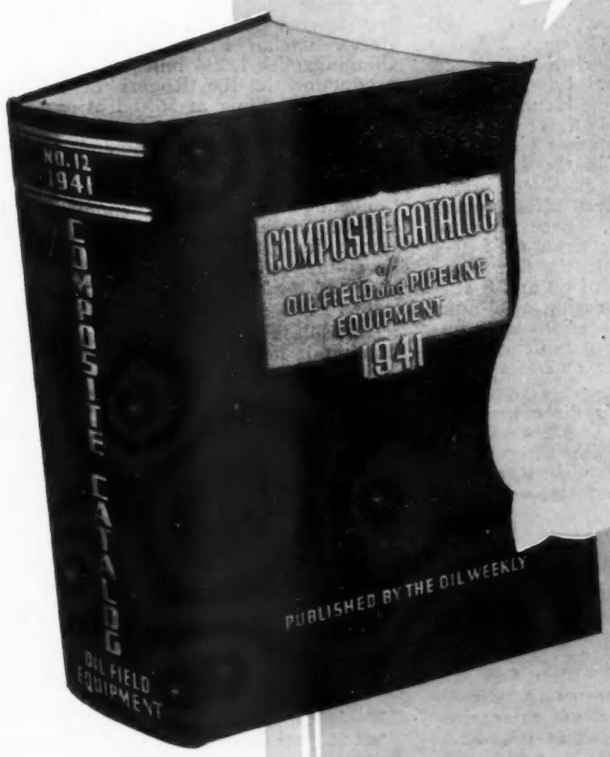

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North and West Texas

Abell Production Extended Southeast With Good Flow

The Abell pool was expanded southeast when Phillips Petroleum Company's Silverman 1 flowed 254 barrels of oil on 3-hour gauge through open tubing after washing casing perforations at 5150-65 feet with 100 gallons of acid. Production is from the base of the regular Simpson sand pay, logged at 5115-65 feet with an elevation of 2393 feet, being 156 feet higher than the main pay in the discovery, which is the nearest producer. Silverman 1 logged top of Simpson at 4740 feet and Tulip Creek at 4916 fet. The regular pay was originally passed up without a test in order to try for a producer in the lower Simpson, which has accounted for a pumper on the west edge of the structure. The lower pay proved disappointing, and best saturation was in 16-foot section, topped at 5604 feet. Seven-inch pipe was landed at 5630 feet, or 5 feet off bottom. Silverman 1 yielded only 26 barrels of oil on swabbing test through perforations at 5586-5619 feet. Phillips Petroleum Company has authorized the drilling of Silverman 2, being 1320 feet west of the new completion. There are 13 rotary rigs in service in the Abell area, which is the most active in Pecos County and the first Ordovician pool to register an active development program.

Gulf Oil Corporation et al's Tubb 3-A, offsetting Ordovician production on the south end of the Sand Hills field, Crane County, was drilling at 5748 feet with hole loaded with oil after flowing 124 barrels of oil on 3-hour gauge. The latter test followed treatment of Ellenberger at 5680-5740 feet with 5000 gallons of acid. Top of Ellenberger is 63 feet high when correlated with the east offset, but the upper section is subnormal in porosity. Gulf Oil Corporation's, University 1-F, Crane County wildcat, was drilling Simpson shale and lime at 10,582 feet.

Amerada Petroleum Corporation's University 1-R-A, projected Ordovician test on a geophysical prospect in Southeastern Reagan County, was drilling at 2340 feet. Protection string of 7⅝-inch pipe was landed at 2225 feet. This wildcat logged top of Yates at 1410 feet and lime at 2160 feet. Another deep wildcat has been scheduled by the company to be drilled on its seismograph prospect, centering upon Public School Land Survey, Blocks B-4 and B-6, Winkler County. Prices on small tracts within the block have advanced to $15 per acre.

Revival of drilling on the west side of the Church & Fields area, Crane County, is to result from the sale of Humble Oil & Refining Company's University C and E leases, involving all of Section 40, Block 30, excepting the N½ NW¼, to R. A. Borger et al. The property has 3 pumpers drilled in 1928-30. Borger et al paid $30,000, half cash and balance from 5/16 of the production in addition to 1/16 over-riding royalty. Deep rights were retained by Humble Oil & Refining Company.

Magnolia Petroleum Company's Teague 1, Northwestern Martin County wildcat and the deepest test in the basin region that separates the east and west portions of the district, was drilling at 7010 feet. The Clear Fork member of the Permian, entered near the 5300-foot level, proved dry.

M. A. Grisham and M. J. Delaney's Cowden 1, Section 4, prospective deep producer for the North Goldsmith pool, Ector County, tested water when plugs were drilled from 5½-inch pipe at 5260 feet with cable tools. Source of the water is being checked on the supposition that it is from a defective casing joint, or seat. Broken saturation at 6240-6335 feet and 6410-6422 feet gives promise of yielding oil production.

First Mississippian Well in Clay County Makes Good Flow

The Clay County wildcat of Shell Oil Company on the Coleman 255-acre lease, northeast corner of Block 24, Calhoun County School Lands Survey, 7¾ miles southeast of Henrietta, developed large natural flow of high-gravity oil after perforating pipe opposite lower saturation in the Mississippian. It is the deepest producer in the district, and is the first Mississippian well for Clay County. Three series of casing perforations between 6182 feet and 6283 feet resulted in the flow stepping up to 167 barrels of oil and 8 barrels of water through casing on 3-hour gauge. Additional perforations were underway late last week to tap the upper pay, topped at 6128 feet, or 2 feet in the Mississippian.

Shell Oil Company's discovery was carried to Ellenberger at 6727-6837 feet for geological information after showing for a commercial well when the Mississippian was first tapped. The Viola lime, which is rarely present in North Texas, was entered at 6397 feet, and the Simpson was topped at 6455 feet, but neither carried saturation. Five-inch pipe is cemented at 6589 feet. Original casing perforations at 6380-90 feet yielded trace of oil and gas with an abundance of water. Same results occurred at 6309-10 feet. First free oil appeared after perforations at 6276-83 feet, but small amount of water was also present. Perforations at 6268-75½ feet resulted in the first flow through casing, involving 203 barrels oil and 6 barrels water in 12 hours. Perforations at 6230-62 feet boosted the yield to 192 barrels oil and 1 barrel water in 6 hours, and the largest flow listed above followed the addition of 134 shot holes at 6182-6230 feet. The well is 4¾ miles southwest of the Hapgood pool, which is also the nearest pipe line connection.

King Oil Company et al's Taylor 1, wildcat between the Hull-Silk and Mankins Deep areas, is rated as a 15-barrel pumper to become the first Mississippian well for Archer County. The Mississippian was encountered at 4929 feet, and saturation extended to the 4944-foot level. The upper and middle Ordovician section is absent. The Ellenberger at 4963-5055 feet was barren.

Benson & Benson's Seay 1, western Montague County semi-wildcat and 1¾ miles southeast of nearest production in the Ringgold pool, enhanced the possibility of the producing area being given a major extension through having logged oil saturation in conglomerate at 5752-60 feet followed by lime and conglomerate bearing oil stain to 5762 feet. Drill-stem test is to be run before deepening. Seay 1 entered the Bend lime at 5664 feet, being 30 feet low to the nearest Ringgold producer, and 52 feet high to Benson & Benson's Benton 1, an Ordovician failure. Gulf Oil Corporation's Scaling 1, Clay County test for the original Worsham pool, yielded small volume of oil and salt water when swabbed and bailed dry at 5658 feet. It will be deepened. Top of Bend was called at 5600 feet, being 60 feet high to nearest producer in the Ringgold pool, 2½ miles northeast.

Two Montague County wildcats were placed on the doubtful list. Seitz-Comegys & Seitz, Inc.'s Ritchey 1, 1½ miles southeast of Belcherville and 2¾ miles west by south of the Rogers & Rogers 3-pay area, was drilling at 5670 feet in Bend topped at 5550 feet. Conglomerate and lime section at 5570-88 feet carried oil stain and possibly salt water. Sinclair Prairie Oil Company's Clingingsmith 1, 2½ miles southwest of production in the Rogers & Rogers pool, was drilling at 5650 feet and apparently above the Bend. Sinclair Prairie Oil Company's W. H. Admire 3, southeast edge test for the Bonita pool, flowed 176 barrels oil on 3-hour proration gauge from Bend conglomerate at 5234-64 feet and 5424-29 feet. It is the second dual pay completion for the area. Seven-inch pipe is cemented at 5419 feet, and perforations made at 5234-64 feet.

Amerada Petroleum Corporation's Condon 1, mile west of the north end of the Fargo pool, Wilbarger County, provided the first failure since the discovery last July, and abandoned in Strawn at 4810 feet. The company has accounted for 12 of the 13 completed oil wells, and is operating 2 rigs. Pois, Schulz & Pigg are starting a southwest outpost, Green 1, NE SE NE H&TC Section 32, Block 15. Snowden & McSweeney Company's Emmett-Gulf 1, 1¼ miles east of production, proved dry in the Cisco, and was drilling shale at 3500 feet. Anderson & Prichard Oil Corporation's Flaniken 1, offsetting production on the east side of the pool, tested 50 barrels oil daily after using 6500 gallons of acid in broken Strawn at 4396-4524 feet. The hole is due to be plugged back for completion opposite Basal Canyon at 3928-43 feet, where a flowing producer was indicated. Production test of Humble Oil & Refining Company's McCaleb 1, north edge of pool, was delayed when temperature test showed insufficient cement behind the 5½-inch string at 4419 feet. Broken saturation in Strawn at 4446-4544 feet is expected to make a producer.

Charles Kadane and J. N. Fidel's Cochran 1, east offset to the 2900-foot discovery pumper for the Harrold pool, Wilbarger County, flowed 100 barrels of oil in 1¾ hours after drilling plugs from pipe set on deeper pay at 3271-81 feet. Gas volume was inadequate to maintain the flow, and it is due to be placed on pump.

The Texas Company's Harabal 1, Foard County wildcat on a 2890-acre unit block, was drilling at 6810 feet, and will be carried to the Ellenberger. In southern Baylor County, Amerada Petroleum Corporation's Upshur County School Lands 1, near center of 4983-acre block, was drilling at 4940 feet.

Jones County Wildcat Has Good Broken Saturation

The sparsely explored Bend lime series in Jones County accounted for a prospective oil producer when Fain-McGaha Oil Corporation and S. B. Roberts Company's O. J. Cooper 1, SEc SW T&P Section 29, Block 15, 5 miles northeast of Hawley, logged broken saturation at 4849-4919 feet. Drill-stem test at 4849-70 feet yielded 90 feet of oil and rotary mud, and more pay was logged to the total depth. Five-inch pipe was moved in late last week to try for a completion. Cooper 1 entered the Bend at 4819 feet with an elevation of 1696 feet.

General Crude Oil Company's Flannigan 12, second deep test for the Royston field, Fisher County, halted operations in hard sandstone at 6746 feet in the Cambrian, topped at 6410 feet with an elevation of 1793 feet. No shows were recorded in the Cambrian, which has been reached by comparatively few tests in the general area due to the normally thick section of overlying Ellenberger. However, Flannigan 12 logged only 316-foot section of Ellenberger.

The Texas Company has disposed of the bulk of its shallow stripper production in Brown and Coleman counties with the sale of 6 leases with 46 pumpers to J. D. Sandefer, Jr., of Breckenridge for a reported consideration of $80,000. The deal includes The Texas Company's 1200-foot properties in the Fry pool, Brown County, where a water-flooding project was launched in June, 1936.

East Texas

Two-Mile Extension to Long Lake Field Promised

A 2-mile east extension for the north end of the Long Lake field, Anderson County, appeared promising when Tex-Harvey Oil Company's Cartmel 1, near southwest corner of 605-acre tract, Edley Ewing Survey, encountered gas-distillate and oil-saturated sands at favorable structural levels in the Woodbine. A 26-foot section of broken sand, topped at 5320 feet with an elevation of 332 feet, showed gas and distillate, while lower sand series at 5366-87 feet is expected to yield oil. String of 5½-inch pipe was cemented on bottom to complete through perforations.

The Texas Company's Greenwood 1-A, Keechi Dome flank test, was drilling at 5065 feet, and may continue to the Georgetown for geological information. Top of Woodbine series was called at 4815 feet, and sand at 4858 feet showed water on core analysis.

Sun Oil Company's Henderson 1, Orecity prospect, Upshur County, was drilling at 7610 feet in the Lower Glenrose with the Pettit due near this level.

Expansion of the Hawkins field to the northeast is promised by two tests awaiting completion on Humble Oil & Refining Company's acreage. The company's Ponder 1, located on 151-acre lease, Herrington Survey, entered the Woodbine series at 4558 feet with first saturation at 4682 feet, or 4240 feet subsea. Pipe was landed on bottom to complete through perforations. Due to the favorable structural position and sand conditions recorded by this outpost, the company has started Snow 1, a west

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offset on 119-acre lease, and made locations for initial tests on the J. B. Smith 126-acre lease and the Ella Faulk "B" lease, involving 160 acres, all in the Herrington Survey. The company's Atkins 1, near center of west line of 341-acre lease, Mosely Survey, logged ample saturation to assure a producer in drilling at 4803 feet.

Humble Oil & Refining Company's Clift 1, east offset to the Hawkins field discovery pumper, flowed 259 barrels of pipe line oil through ¼-inch choke in 18 hours from casing perforations at 4862-72 feet. It was carried to 4916 feet, and originally tested through perforations at 4902-04 feet to ascertain the water level. In view of the performance of this well, the discovery does not define production on northwest edge of the field.

Southwest Texas

Magnolia Makes Third Strike On Seeligson Ranch

Magnolia Petroleum Company again scored on the Seeligson ranch in Jim Wells County, where the company already has two pools. The new strike, from Frio, is 8000 feet southeast of Premont pool and 20,000 feet southwest of the East Premont area. Seeligson Unit 4, Well 1, was drilled to 5038 feet, 19 feet in sand and pipe landed on bottom. Perforations were made at 5024-30 feet with 18 shots and the well was flowing several barrels of fluid per hour, including mud, wash water and some 39-gravity oil. Drill-stem test at 5024-26 feet, recovered 240 feet of oil under 70 pounds pressure in 15 minutes, and at 5026-31 feet recovered 540 feet of oil, 20 feet of mud and showed 62 pounds pressure in 15 minutes. Al Buchanan of San Antonio is the contractor.

In Nueces County W. B. Osborn and Mid-Continent Petroleum Corporation's Burow 1, Block 69, and two miles northeast of North Agua Dulce, was drilled to 7512 feet. Sidewall samples recovered sands with oil shows and pipe was landed on bottom. Markers high with other wells in the Agua Dulce area.

Baytex Oil Corporation and Atlantic Refining Company's deep exploration on the McColloch tract in the McCampbell field, Aransas County, was awaiting orders to deepen from contract at 9502 feet. The well had attempted to blow out at 9357 feet.

At Cordele, Jackson County, Frost & Dunnam apparently uncovered a lower pay for the area when Pressly 1 cored the regular field sand at 2650-60 feet, then went to 2742-47 feet, where it made an estimated 20 barrels per hour through ¼-inch choke with 400 pounds working pressure and 7500 pounds casing pressure. The oil is 21 gravity.

The Texas Company was completing a second well in the deep sand recently uncovered in the Ganado field. Deepened from 5094 feet, the hole is bottomed at 6472 feet. First test through perforations at 6466-71 feet netted gas and these holes were squeezed.

Humble Oil & Refining Company's Robbins 1, northeast outpost to the La-Ward or Maubro field of Jackson County, was coring for the 5200-foot field sand. The company is staking a number of locations on the structure preparatory to an extensive drilling campaign.

Pure Oil Company uncovered a new producing level for the West Ganado field with Spacek 2. A series of broken sands between 4700 and 4810 feet, drill-stem tested between 4724-70 feet, in 15 minutes recovered 42 stands of oil, 1 stand of sand cut with mud and 88 pounds pressure.

More than a mile northwest of Willamar field, Willacy County, Pan American Production Corporation's Kent 1, Share 13, flowed 108 barrels of 30.4-gravity oil per day through ¼-inch choke. Pressure on tubing was 175 pounds with casing sealed. The gas/oil ratio had been reduced to 200 cubic feet per barrel and water intrusion was .3 percent. The production is from 7925-70 feet, where 225 perforations were made. Tests as high as 7830-43 feet showed gas.

At Carrizo, Dimmitt County, Ecleto Oil Company was drilling near 3100 feet in Kirk et al 1, ½ mile southeast of the discovery. After running low in the upper section, the section thinned materially and the test encountered a sand at 2984 feet, which was hard and gassy. A drill-stem test to 2984-91 feet failed when the tool slipped and another test at 2980-3001 feet recovered 200 feet of gas-cut mud. The well may lead to deeper production in the area. A northeast offset to the discovery, Renalia Oil Company's McKnight 1, was waiting on orders at 2466 feet, but likely will be carried much deeper.

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Texas Gulf Coast

New Field in Hardin County; Chocolate Extension Good

Republic Production Company and Houston Oil Company last week completed Elliott Fee 1, southwest of Silsbee field, as a new Cockfield sand oil field. Sand was cored at 6917-23 feet, total depth, in side-tracked hole, and the well came in after washing only a short time. Not completely cleaned at time of latest report, the well was making oil and a little wash water at the rate of 3 barrels hourly through ⅛-inch choke with tubing pressure 1150 and casing pressures 1900 pounds. No gas-oil ratio test had been made. There was no salt water in evidence during the preliminary tests and potential is being taken.

Phillips Petroleum Company's Chocolate Bayou outpost, Brazoria County, Triangle Development Company 1, over half a mile from the closest production, was completed in an upper sand as possibly the best well in the field. After showing water on several tests at 9950-53 feet subsequent to the original drill-stem test there that showed lots of oil with the water, operators squeezed off these perforations again and shot from 9920-23 feet in a sand just above and separated by a shale break. It was washed in and flowed 38-gravity pipe line oil, cleaning itself swiftly, and making a total of 215.98 barrels in 24 hours through a ⅛-inch choke on the potential test. Tubing pressure was 1600 pounds, casing sealed, and gas-oil ratio 1250/1.

At Chenango, Brazoria County, J. Newton Razor's Christian 3, ¼ mile east of the discovery well, was abandoned at 9000 feet after failure to find oil in the 8500-foot discovery sand. The field is now limited, as far as the upper Frio is concerned, on the south and east.

Stanolind Oil & Gas Company and Gulf Oil Corporation's Vieman 1, wildcat several miles west of Chenango, ran electric log at 8602 feet, and without making any detailed report on just what had been found in the upper sand, decided to drill ahead and was nearing 9000 feet at the close of the week.

Stanolind Oil & Gas Company's Seaberg 5-C, long south outpost in the Martha field, Liberty County, landed 5½-inch casing at 8244 feet and will attempt to extend the field in one of the two sands found at 8100 feet in the Cockfield-Yegua formation.

Superior Oil Company's northwest flank test at the Fannett field, Jefferson County, which will probably extend the field in the sand at about 8400 feet, drilled ahead to prospect the deeper formations before making any effort to complete, and at latest report was near 10,000 feet, making another survey.

British American Oil Company's discovery in the Gulf of Mexico, Jefferson County, is still flowing a steady 4.75 barrels hourly through a ⅛-inch choke, clean oil, and production is being cared for in lease tanks and a 5000-barrel barge moored at the derrick. A 4-inch line is being laid to shore. Plans are not yet complete for the next drilling operations in this new field, but tentative plans call for drilling the next well or two from this same platform.

Louisiana Coast

West Baton Rouge Parish Field Opened

Amerada Petroleum Corporation is credited with the first oil field in West Baton Rouge Parish, in the Port Allen district. Wilbert 1 was flowing into storage tanks which were built hurriedly following an initial production gauge of 8½ barrels hourly, or at the rate of 204 barrels of 36.8-gravity oil per day on a ⅜-inch choke. Pressure was 1450 pounds on the tubing. Production was through 40 casing perforations at 9610-20 feet, after two previous tests failed to show oil. Salt water content was not reported. Producing sand is at 9604-30 feet, according to electric log run after maximum depth of 10,044 feet was attained. This sand section was among several shows from 8900 feet to bottom. Two previous tests were made at 9981-86 and 9654-64 feet, both showing salt water. This discovery was drilled under contract by Parker Drilling Company.

The Ville Platte field became more or less defined by dry holes drilled on two sides by Continental Oil Company and Danciger Oil Refineries. Continental Oil Company's well, 2000 feet northeast of production, had salt water sand at 10,425 feet, total depth, and was abandoned. Danciger Oil Refineries well, on the southeast edge of production, was drilled to 10,211 feet.

Sparta-Wilcox Start

The Sparta-Wilcox trend, despite setbacks of recent months in the Louisiana Gulf Coast district, added a new drilling well. Navarro Oil Company's Cooper 1, Section 54-4n-2w, just west of Alexandria in Rapides Parish. Sparta and Wilcox production is found in Eola, Cheneyville and Ville Platte fields in this district. The new test expects the Wilcox sand at 4500 feet, and operators probably will drill through the section, with a projected depth of 7500 feet.

Discovery promise was given by The Texas Company's State 1, on Delacroix Island in Plaquemines Parish. Reports are that several oil and gas shows have been recorded to 11,165 feet. Casing has been set at 10,210 feet.

Another Texas Company wildcat which may become a discovery in Plaquemines Parish is State 1, in the Octave Pass district. Casing was cemented at 11,494 feet for probable tests. Reports on this well are about the same as the company's State 1, at Delacroix Island, in regard to shows of oil and gas. This wildcat is also reported to have indicated a dome at about 9500 feet.

Avoyelles Parish

Production tests will begin shortly on Cockburn, Hargrove & Bateman's Lake Latainer area wildcat in Avoyelles Parish. Casing has been landed to about 6700 feet. Shows in the Wilcox zone at about 6600-6700 feet will be tested. Electric log failed to reveal an oil sand in this vicinity, but side-wall cores reported good saturation. The wildcat was formerly owned by W. C. Brock.

Superior Oil Company began side-wall coring in Miami Corporation 1, at Pecan Lake in Cameron Parish, after the bit penetrated to 10,555 feet. A number of questionable shows were reported.

Fohs Oil Company's new sand discovery in the shallow Gueydan field, Vermilion Parish, started flowing, and on an 18-hour test made 168 barrels of pipe-line oil through a 29/64-inch choke with pressure about 200 pounds. It died, however, and at last report the company was installing pumping equipment. The new sand was topped at 4849 feet.

North Louisiana

Two Wildcats Renew Interest In Monroe Uplift Flanks

Search for oil on the flanks of the Monroe Uplift, which has been fruitless so far, was renewed last week when two wildcat locations were made for deep tests, one on the west flank and one on the east flank of this structure.

On the east flank, Union Producing Company will drill E. M. White 1, NW irregular Section 37-20n-6e, Morehouse Parish, in an area where the deepest test geologically ever drilled in North Louisiana was drilled about two years ago. On the west side of the structure and adjacent to the Monroe basement fault that runs southeast-northwest from the vicinity of the Arkansas oil fields around El Dorado and Smackover to the Angelina-Caldwell Flexure extending across North Louisiana, Louark Producing Company made location for Finley 1, NE SW 10-20n-1w, Union Parish.

Wildcat activity continued at an active pace on the Olla trend. In Caldwell Parish, V. V. Ryan et al made location for their second wildcat, Louisiana Central Lumber Company 2, C NW NE 33-13n-4e. Sun Oil Company has an interest.

Near Manifest, Catahoula Parish, Joe Belt has taken a 6000-acre block around Section 54-9n-5e for a wildcat to start by July 1. H. L. Hunt is adding to a block in Township 14 north, Range 4 west, Jackson Parish.

On the west end of the play along the Angelina-Caldwell flexure, Louark Producing Company had a geophysical unit working in Township 7 north, Range 7 west, Natchitoches Parish, as well as a similar unit in Townships 4 and 5 north, Ranges 9 and 10 west in the same parish. Stanolind Oil & Gas Company has a unit working in Townships 6, 7 and 8 north, Range 9 west and Townships 11, 12 and 13 north, Range 12 west, Natchitoches Parish.

Landreth Producing Company has acquired considerable acreage in Township 9 north, Range 2 east, LaSalle Parish, near the Little Creek area, and is obligated to drill 16 tests, including one 3100-foot test by April 20. Dependent on permits from the Louisiana Department of Minerals, these tests will be twin wells to two sands.

T. E. Davidson, New Orleans, has leased approximately 1500 acres in Township 9 north, Range 5 west, Winn Parish, for a 2600-foot test. In the same parish, R. E. Anderson continues to add to his acreage in Townships 11 and 12 north, Range 1 east.

Frank Phillips, Bousna et al have acquired from A. M. Neelley, Shreveport, a 4000-acre wildcat block around Section 16-22n-5w, Claiborne Parish, and will start a 5200-foot test by April 1. W. M. Renick was leasing in Township 22 north, Range 4 west, Claiborne Parish, and J. D. Carruthers et al were acquiring additional acreage around the Lisbon field in Townships 20 and 21 north, Range 5 west. J. W. Halsey was leasing in Township 22 north, Range 5 west.

Grady H. Vaughn et al plan to start soon on a 9000-foot lower Marine test in NE 11-21n-4w, Claiborne Parish. Union Producing Company was still attempting to get 640 acre units in its 12,000-acre block around its recently completed 10,478-foot gas-distillate well in NE 18-21n-4w,

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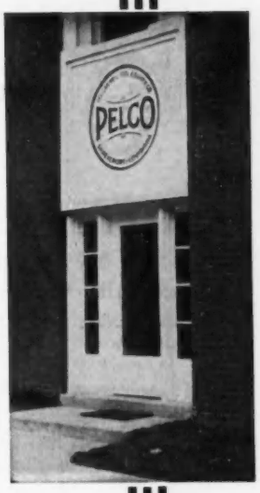

Perhaps the "abundant life" is slopping over. If we held the reins of government at a time like this we're afraid the boys who don't want to work peaceably for good compensation would be consigned to the army at $21.00 a month where it's considered bad form to resent teamwork. We've often wondered what it would be like to be a cog in one of those industrial machines where men get dissatisfied, and maybe call a strike because a customer wants service at an hour when the rules forbid working, or because the janitor works barehanded in a black cap when the rules call for white gloves and a derby. For 33 years we have had so much fun working in harmony with ourselves and our customers that we aren't very tolerant about any other plan.

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and was seeking a spacing rule for that size in its 10,000-foot tests. An analysis from the deep discovery well, Meadows A-1, shows gas/oil ratio of 10,000/1; gasoline 40 percent, gravity 69.8 crude; naphtha 19.5 percent, gravity 54 degrees; kerosene, 18.3 percent, gravity, 46.6; bottoms, 21 percent, gravity 38.8; loss, 1.2 percent; no sulphur, sweet gas.

The Louisiana Department of Minerals has called a hearing to be held in Baton Rouge April 16 to discuss spacing, production allowables and allowables of oil and gas for the Louisiana side of the Logansport-Joaquin field, DeSoto Parish.

Propose Early Tests in Columbia and Union Counties

Although there was little development except of a routine nature last week in Arkansas fields, indications of increased activity during the spring and summer were given by several projects that are still in the tentative stage.

Phillips Petroleum Company is negotiating with other companies for a proposed Smackover lime deep test in NW SE 23-17s-21, Columbia County.

Lion Oil Refining Company is studying a proposed test in the Wesson area, Union County, after a geophysical survey. Louark Producing Company has considerable acreage under lease in this area.

Stanolind Oil & Gas Company is taking some leases in township 17 south, range 19 west, Columbia County.

Roberts & Murphy are re-working Leona 1, Lot 6 SW 7-18-17 at Schuler, for completion in the Reynolds (Smackover lime). The well was productive in the Lower Marine (Jones) sand.

California

Drilling Slumps Sharply; Little Improvement Seen

So far this year, drilling activity in California, as reflected in number of drilling permits filed with the California Division of Oil & Gas, has averaged about 18 percent below the corresponding period of 1940, the total standing at 259 permits to April 5. Unless there is a broad expension of prospecting activity, the ratio of new drilling when compared with the preceding year is expected to continue well behind 1940 totals as many areas under development rapidly are being drilled up.

Drilling in most of the deep fields in the San Joaquin Valley, opened in 1936, 1937 and 1938, has progressed to a point where sharp reductions shortly will be seen in number of drilling strings, due to lack of proven locations, unless prevailing 20-acre well spacing, effective in most of these areas, is reduced to 10 acres or additional extensions are discovered. At Coalinga Northeast and Coalinga Eocene, for example, there are 16 active projects. By September, it is believed that all present proven locations will be drilled.

A temporary stop-gap may be provided, however, by drilling proven heavy oil producing areas due to the continued uptrend in demand for fuel-grade oils. All of the state's heavy oil fields are shallow and easily drilled. A transfer in activity to such areas, therefore, might reflect favorably in the total number of wells drilled, but the individual project would represent but a small percentage of total expenditure for equipment required for the state's deep wells, and the potential output made available would fall substantially below the unit contribution of the deep wells.

Development activity is being renewed extensively in the state's heavy oil areas, particularly at Kern Front, Kern River, Midway-Sunset and Mount Poso in the San Joaquin Valley; at Santa Marie Valley, Cat Canyon and at Gato Ridge in the Coastal District.

Union Oil Company abandoned efforts to develop deep production in Callender 79, Dominguez field, Los Angeles County, which was taken to 12,720 feet, the greatest depth yet drilled in the Los Angeles Basin. The well was plugged back to 7490 feet, and the company will seek production from the upper zone. Production tests run at 10,010-310 feet resulted in a show of muddy water and small amount of oil and gas.

In the Shafter area of Kern County, Continental Oil Company's KCL No. C-2, wildcat in Section 35-27-24, bottomed at 11,349 feet, has been plugged back to 9549 feet for a fishing job, and an effort will be made to whipstock from that level and re-drill.

Oil and gas showings have been noted in the ditch at Hathaway Company's Ram 1, wildcat in Section 31-5-17, Castaic area, Los Angeles County, which was reported drilling at about 2250 feet in shale with streaks of sand. No solid sand body had yet been encountered.

In El Capitan field in Santa Barbara County, Shell Oil Company staked location for five wells on its Covarrubias property. This will mark first development work in the area by the company since September, 1938, when Covarrubias 1-29 was completed at 1500 feet.

Continental Oil Company completed rig for a scheduled test in the Grapevine area of Kern County, Section 28-11-19. Extensive leases were acquired by the company in this area recently from Reserve Oil & Gas Company. The Ohio Oil Company, Richfield Oil Corporation, Kern Line Oil Company and others have drilled numerous wildcats in this area over the past five years. Some distillate and gas have been produced in commercial quantities, but nothing of importance placed on production.

Congressional Action Permits Lance Creek Development

Two locations were spotted last week at Lance Creek, in the western part of the field and not in the recently cleared lands. Both are Ohio Oil Company operations, Carrie Putnam 20, NW SW 33-36n-65w, and Richard & Comstock 4, NE SW 32-36n-65w.

In the Rock River field, Carbon County, Wyoming, The Ohio Oil Company's State 12, CW NE 30-20n-78w, which indicated extension of the field ¼ mile northwest, was completed for 250 bar-

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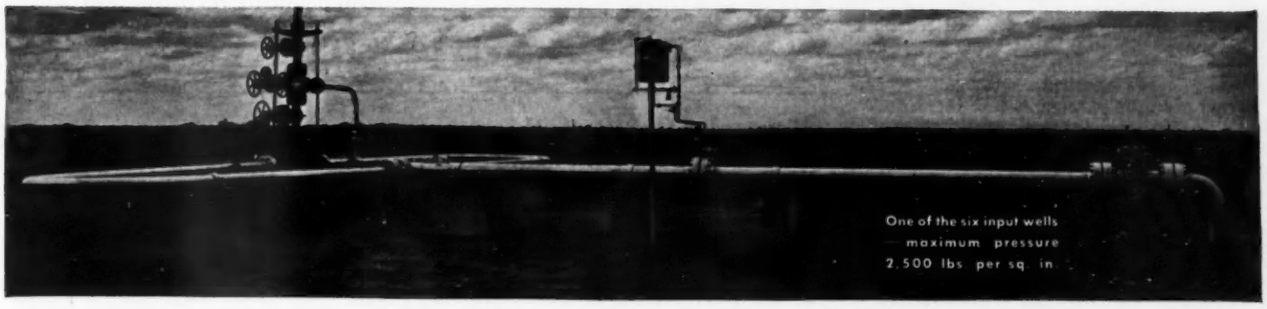

One of the six input wells — maximum pressure 2,500 lbs. per sq. in.

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This is true at the Agua Dulce field with its mammoth high-pressure absorption plant for the recovery of gasoline and distillate. Thirty miles of high-pressure gathering lines feed the Coastal Recycling Corporation plant—having a capacity of 140,000,000 cubic feet of gas daily!

Trustworthy **METRIC-AMERICAN** Orifice Meters and Flowmeters are installed at the key input wells, the flowing wells, and—in the distillation circuit—on the fractionating stills and absorbers.

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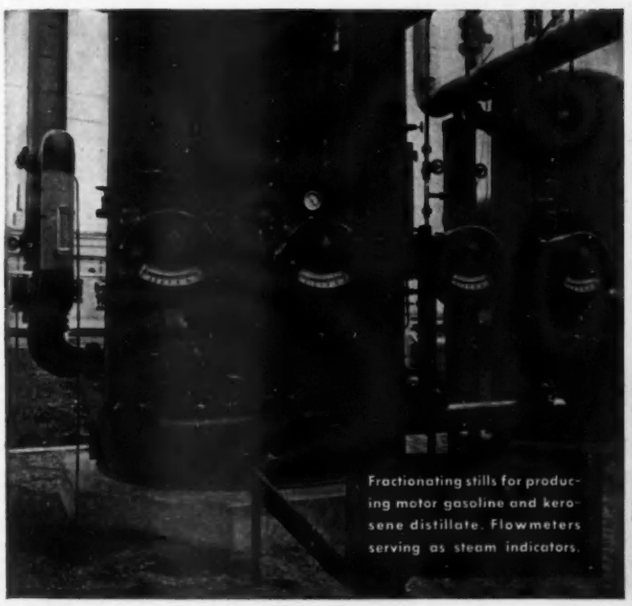
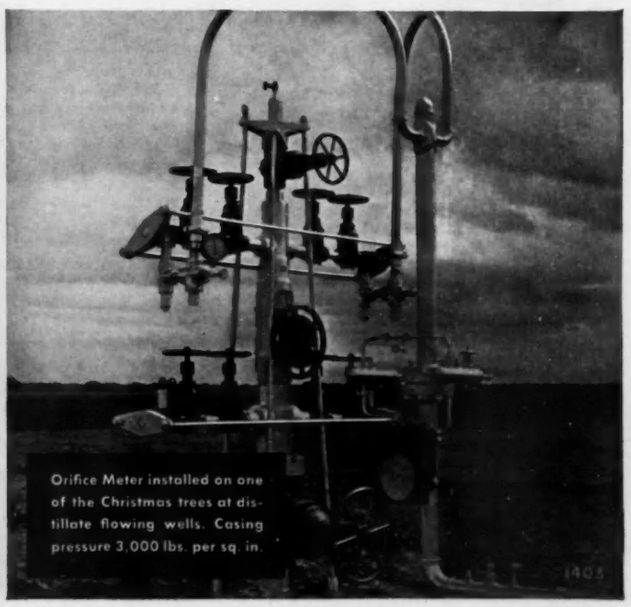


Fractionating stills for producing motor gasoline and kerosene distillate. Flowmeters serving as steam indicators.



Orifice Meter installed on one of the Christmas trees at distillate flowing wells. Casing pressure 3,000 lbs. per sq. in.

rels pumping initial from 3721 feet. The 5-inch production casing was set at 3601 feet, on top of the Dakota series. The company's State 12, NW NE 34-20n-78w, a slight extension test on the west flank of the field, was drilling at 251 feet after setting 9⅝-inch surface string at 142 feet.

A ¼ mile northwest extension to the LaBarge field, Sublette County, southwestern Wyoming, was made by Marvel Oil Company's Government 6, SE SE 28-27n-113w, completed for 45 barrels initial pumping at 1155 feet, with 7-inch casing set at 1125 feet in the Wasatch.

In the North Baxter Basin field, Sweetwater County, Wyoming, Rocky Mountain Drilling Company resumed operations in State 1, SW SW SW 36-20n-104w, which was coring at 4658 feet in the Basal Sundance.

Michigan

Montcalm County Wildcat Promises Oil From Monroe

While spring mud bogged down drilling operations and new starts trailed far behind last year's level, developments in Michigan last week took on encouraging aspects with three areas opened last year finally developing better production and drawing new starts.

Discovery promise loomed for Robert W. Atha's Jaqua 1, SW SE SE 23-11n-10w, Pierson Township, Montcalm County, as the wildcat drilled oil and gas in the Monroe at 3260-64 feet, topped at 3230. Hole was carrying 2500 feet of water from upper beds when the show was picked up, and mud delayed trucking in a string of 5-inch casing to test.

Two basin areas increased in importance. Weber Oil Company's Fatum 1, Section 30-18n-10w, Osceola County, ½ mile north of the discovery, increased production from 35 to 86 barrels a day with a second acid treatment of a Dundee pay at 3517 feet. The Pure Oil Company was running derrick for a west offset.

In the Winterfield Township pool, Clare County, Sun Oil Company's State A-3, C S SW NW, Section 36-20n-6w, flowed 584 barrels in 20 hours by heads from Dundee dolomite at 3796 feet for the best production so far in the field.

Five machines have been moved into Casco Township, Allegan County, following completion of A. R. Urion's Voss 1, Section 35-1n-16w, for 60 to 70 barrels per day from Traverse lime at 1102 feet. Voss 1 was the third producer for the area.

Claiming more interest than actual developments with the drill was announcement that Smith Petroleum Company will drill a deep test in the Grand Rapids field, with the St. Peters sand as objective. Under consideration for nearly a year, the deep test will be drilled as a cooperative project by several acreage holding companies in the field. The test is Cummings A-1, C S½ SW SE 30-7n-12w, Kent County, in the approximate center of the field developed in 1939 and 1940 for 1800- to 1900-foot Traverse production. Available geological data indictates the St. Peters should be penetrated around 6000 feet. Hole will be drilled with cable tools.

Regal Dutch Petroleum Company's Heasley 2, SE NW NE 21-4n-13w, first deep test in the Salem pool, Allegan County, logged top of Salina at 2670 feet, and carried 304,000 feet of gas at 2728 feet. Drilling was in the Salina salt beds, with the Trenton the objective.

Gulf Refining Company's Bateson 1, Section 2-14n-4e, Bay County, was in a tough spot as gas set up a semi-blowout during whipstocking operations. The fifth whipstock had been drilled off to 6348 feet and pulled. Gas started to throw mud as the 5-inch pilot bit was being returned to ream the hole. Well was shut in to wait reconditioning of mud. Gas broke through against 11.9-pound mud.

Kentucky

Birk City Outpost Dry in Jett Sand

Abandoned through the Jett sand was an outpost to the Birk City field, a mile northwest of Birk City, in Daviess County, Barnett et al's Rosalie Coy 1. North 1000 feet, same operators were rigging up to spud Smith 1.

Drilling at 200 feet with rotary was Sun Oil Company's Wood 2, wildcat in Graves County, eight miles east of Litchfield.

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Today's "everyday" job includes new depths, faster tools and drive for speed. That means *steam*—higher pressure steam—with little time out for maintenance.

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UNITED STATES WELL COMPLETIONS

Arkansas

Company, Well and Location	Init. Prod. Bbls.	Depth
Union County (Rainbow City)—		
Lion O. R. Co., Dunbar 1, 31-17-14	*	3850
Union County (Smackover)—		
J. D. Reynolds, Laney 1, 8-16-16	40	2696
Sam Richardson, Goodwin B-3, 32-15-15	65	2645
Union County (Urbana)—		
McCreslenn Oil Co., Parker 5, 3-18-13	90	3208

California

Company, Well and Location	Init. Prod. Bbls.	Depth
Kern County (Coles Levee)—		
Ohio, KCL F-14, 87-3	596	9890
Richfield, KCL-B 76-28	1275	9400
Kern County (McKittrick)—		
Welport Oil Co., No. 21 (pb 1207)	75	1245
Kern County (Mt. Poso)—		
Da-Me Oil Co., No. 2	30	1410
Shell, Vedder 33	62	1975
Kern County (Rio Bravo)—		
Union, Crites 52-28	3161	11,488
Kern County (Round Mountain)—		
Trico O. & G. Co., Coffee 6	250	1388
Kern County (Ten Sections)—		
Shell, KCL A-35-29	469	8250
Los Angeles County (Long Beach)—		
Shell, Alamitos 45 (pb 4890)	210	4940
Los Angeles County (Montebello)—		
Kern Oil Co., Ltd., Taylor 3	565	7790
Los Angeles County (Rosecrans-Athens)—		
Union, Rosecrans 45	85	9618
Los Angeles County (Wilmington)—		
Long Beach Oil Dev. Co., No. 21	360	4200
Wilmington Oil & Dev. Co., Comm. 2	250	3525
Orange County (East Coyote)—		
Carlton B. Wood, Basten 1	50	4236
Orange County (Huntington Beach)—		
Southwest Explor. Co., State 37	50	4801
Santa Barbara County (Santa Maria Valley)—		
Union, Nicolai 2 (pb 5253)	716	5255
Ventura County (Ventura Avenue)—		
Shell, Taylor 133	2730	8000
OLD WELLS DEEPENED		
Los Angeles County (Long Beach)—		
Hilldon Oil Co., Pool 2, (otd 4167)	81	5520
Orange County (Huntington Beach)—		
Standard, Coyote 2-10 (otd 4800)	421	7030

*Failures; †Junked; ¶Million cu. ft. gas.

Illinois

Company, Well and Location	Init. Prod. Bbls.	Depth
Clinton County—		
J. F. Ashoff, Lampen 1, nwc nw 16-1n-2w	29	1110
Effingham County—		
Benson, Fox 1, sw nw sw ne 22-6n-5e	65	2523
Fayette County—		
Texas, Maxwell 4, ne ne sw 19-6n-3e	*	1634
H. F. Robinson et al, Roe 1, ne se sw 19-7n-1w	*	1328
Irl Rhynes, Koberlein 5-B, ne se nw 4-7n-3e	60	1581
Carter Oil, Welker 1, ne se se 7-7n-3e	30	1558
Durbin 3, sw sw ne 8-7n-3e	80	1537
Miller 1, ne nw se 1-8n-3e	144	1527
Wright 2, sw sw se 20-8n-3e	30	1496
Franklin County—		
L. & W. Dr. Co., Plumlee 1, w½ sw nw 21-6s-1e	*	2925
Wegener, C. W. & F. 1, sw se nw 24-6s-2e	380	2117
Shell, Doty et al 2, nw nw ne 25-6s-2e	572	2147
Benedum-Trees, Sheppard-Raley 1, swc nw ne 35-7s-4e	*	3300
Hamilton County—		
Sinclair-Wyoming, Gage 1, ne sw ne 34-3s-5e	145	3350
Ohio, Matheny 7, nw se se 3-6s-6e	254	3091
Tide Water, Mario 1, nw ne se 3-6s-6e	52	3065
Mario 2, sw ne se 3-6s-6e	243	2075
Jasper County—		
Pure, Telford Cons. 3, c w½ se sw 20-5n-10e	1085	2875
Davidson 3, c e½ sw sw 17-5n-10e	192	2830
Honey 2, c w½ se ne 17-5n-10e	16	2825
Cunningham 1, w½ sw se 16-6n-10e	*	2883
Jefferson County—		
Obering et al, Morgan 1, se nw se sw 25-2s-1e	88	2017
Lawrence County—		
Frontier Oil Co., Gillespie 4, c e½ se sw 13-4n-11w	¶3.0	798
Logan County—		
Bay Oil Co., Lake 1, ne ne sw 11-20n-2w	*	2165
Macoupin County—		
Bridges et al, Felker 1, sw ne sw 1-9n-7w	*	1613
Marion County—		
Texas, Frederick 21, se nw sw 27-2n-2e	70	4650
Shell, Ververs 11, se sw nw 18-3n-13	10	1442
Davidson 2, ne nw ne ne 34-4n-1e (pb 1367)	74	1368
Adams O&G, Fryer 4, c e½ ne sw 21-4n-1e	57	1442
Esperanza Oil Co., Martin 1, sec sw 27-4n-1e	42	1384
Highland Oil, Thalman Est. 1, sw nw nw 35-4n-1e	140	1357
Richland County—		
Oil Well, Hilborn 2, se se nw 24-4n-9e	27	2587
St. Clair County—		
Blon & Jeffries, Harris 1, se nw sw se 24-1n-10w	*	767
Tom Cane, Railroad 1, nw nw sw se 28-1n-10w	7	528
Wabash County—		
Crosby Oil Co., Leek 1, 20 ft w of ne se sw 1-1n-12w (pb 2100)	*	2246
Joe Young, Barney 2, sw c se nw 1-1n-12w	30	2046
Stillwell 8, ne nw nw se 1-1n-12w (pb 2078)	15	2204
Toomey et al, Lutz 1, sw ne nw 8-1n-12w	*	1540
R. W. O'Meara, Gould 5, c n½ nw se 17-1s-12w	100	2359
Gould 6, se nw se 17-1s-12w	75	2050
Harris 6, sw se sw se 17-1s-12w	120	1552
Smith 3, ne se ne sw 17-1s-12w	300	2369
Shell, Risley 4, ne se sw 17-1s-12w	125	2385
Strouble & Stroube, Mt. Carmel 1, swc nw 17-1s-12w	188	2074
Wetzel 1, sec ne 18-1s-12w	152	2081
L. B. Jackson, Smith 1, n½ n½ ne nw 20-1s-12w	54	2394
Hall-Jordan, Canady 2, ne nw nw ne 20-1s-12w	142	2042
Coffman 2, lot 20 blk 212 20-1s-12w	20	1529
Elkins 1, c se se nw 20-1s-12w	60	2415
Landis 1, n½ s½ sw 20-1s-12w	89	2401
Standing 1, nec sw blk 189 20-1s-12w (pb 1529)	5	1610
Ill-Mid-Cont., Jacquess 2, swc nw ne 20-1s-12w	305	2443
J. N. McCummings, Gundon 2, sw se ne 34-1s-13w	98	2642
Washington County—		
Magnolia, Rahn 8, ne ne ne 22-1s-1w	185	1539
Wayne County—		
Pure, Ulm 1, w½ nw se 36-2n-7e	332	3090
Hubble 3, c w½ se sw 32-2n-8e	16	3107
Carter, St. Ledger 1, c se nw 34-1s-9e	*	3404
Alund et al, Felix 1, sw se se ne 19-3s-8e	110	3265
Texas, Poorman 7, sw se nw se 19-3s-8e	*	3487
White County—		
Tide Water, Evans 5, ne nw nw 4-4s-14w	136	2912
Babler Inv. Co., Hon. A-2, se se sw 9-4s-14w	*	2984
Pure, Potter 12, ne sw nw 9-4s-14w	95	2840

Summary of Drilling Operations in the United States, Week Ended April 12, 1941

	WELLS COMPLETED								*PERMITS FOR NEW WELLS				
		New Wells Drilled for Oil and Gas											
	Total for Week	Oil Wells	Gas Wells	Failures	†Miscellaneous	Initial Production	Total 1941	Total this Date 1940	This Week	Total this Month	Total 1941	Total this Date 1940	Year Total 1940
Arkansas	4	3	....	1	....	195	46	57	7	10	43	35	153
California	19	19	....	....	....	11,436	306	304	24	46	259	307	1,042
Colorado	.....	.....	.....	.....	.....	.....	3	3	.....	.....	.....	.....	.....
Illinois	70	53	1	13	3	7,306	872	1,003	85	157	1,095	1,121	4,532
Indiana	9	3	2	4	....	110	123	113	....	.....	....	.....	.....
Kansas	40	29	8	....	3	44,598	542	453	47	90	514	534	2,048
Kentucky	1	....	....	1	....	.....	64	70	....	.....	....	.....	.....
Louisiana	29	15	....	14	....	2,772	379	449	21	56	416	417	1,658
Michigan	12	5	2	5	....	778	221	384	5	18	210	360	1,093
Mississippi	.....	....	....	....	....	.....	45	39	....	.....	....	.....	.....
Missouri*	.....	....	....	....	....	.....	1	2	1	1	3	.....	26
Montana	.....	....	....	....	....	.....	55	32	....	.....	....	.....	.....
Nebraska*	.....	....	....	....	....	.....	23	.....	3	3	20	.....	69
New Mexico	12	11	....	1	....	3,411	101	226	5	13	108	217	559
New York	11	8	....	....	3	48	180	324	....	.....	....	.....	.....
Ohio	45	19	18	6	2	71	417	236	....	.....	....	.....	.....
Oklahoma	54	26	4	18	6	8,321	548	629	56	104	513	569	1,833
Pennsylvania	33	25	3	....	5	47	562	1,069	....	.....	....	.....	.....
South Dakota	.....	....	....	....	....	.....	....	1	....	.....	....	.....	.....
Tennessee	.....	....	....	....	....	.....	....	7	....	.....	....	.....	.....
Texas	212	168	6	37	1	93,616	2,528	3,027	239	461	2,823	3,535	11,170
West Virginia	16	2	11	1	2	30	195	174	....	.....	....	157	782
Wyoming	.....	....	....	....	....	.....	24	46	....	.....	....	.....	1
Total this week	567	386	55	101	25	172,739	7,235	8,648	493	959	6,004	7,252	25,021
Total last week	474	317	31	105	21	126,087	6,668	8,047	466	466	5,511	6,511	25,021
Total this year	7,235	4,627	659	1,648	301	2,196,276	....	.....	....	.....	....	.....	.....

* This tabulation includes those states where weekly data are available; figures for Missouri date from August 10, 1940; Nebraska from August 3, 1940.
† Includes old wells deepened, water-intake, gas input, and salt water disposal wells.

United States Well Completions—*Continued*

Company, Well and Location	Init. Prod. Bbls.	Depth
Delta Dr. Co., Boultinghouse 7, sw sw nw 16-4s-14w	75	2600
Boultinghouse 8, nw sw nw 16-4s-14w	75	2600
Shell, Daly 3, swc ne sw 17-4s-14w	106	2282
Wiser, Chapman 3, se ne sw 23-6s-8e	50	3189
OIL WELLS DEEPENED		
Marion County—		
W. C. McBride, Inc., Lee 17 sw ne se 29-2n-2e (otd 3428)	125	4651
Texas Co., Wayman 20, se nw nw nw 32-2n-2e (otd 3360)	190	4578
White County—		
Sun, Greathouse 5, ne nw nw 4-5s-14w (otd 2914)	40	2974

Indiana

Blackford County—		
Annie Gessell, Fee 11, nec ne 17-23n-11e	¶0.01	970
Daviess County—		
J. W. Cannon, Evans 6, se nw se ne 8-2n-5w	•	862
Decatur County—		
St. Paul Natural Gas, Peck 2, sec sw sw 34-12n-8e	¶0.05	870
Gibson County—		
W. G. Turbeyville, Heston 1, ne ne se 8-3s-13w	•	2852
Martin County—		
Collier & Burton, Swayze 1, se nw ne ne 10-3n-4w	•	765
Posey County—		
Sun Oil, Miller 4, sw se sw 1-7s-12w	60	1924
Basin Dr. Co. et al, Oakland City College 2, se ne sw 1-7s-12w	35	2683
Steuben County—		
C. C. Goff, Robertson 1, ne se se 25-36n-13e	•	1000
Vanderburg County—		
James Havens, Dye 2, nwc ne nw 31-5s-11w	15	1225

Kansas

Barton County—		
Darby, Stoskopf 1, c n½ nw nw 21-16-12w	•	3369
Bitter 3, c n½ sw ne 5-16-13w	3000	3363
Cities Service, Bitter "E" 2, c s½ nw ne 17-16-13w	•	3431
Republic, Radenberg 1, c w½ nw se 8-17-11w	68	3332
Skelly, Disque 1, c n½ ne ne 9-17-11w	•	3384
Stanolind, Schmidt 4, csl sw nw se 35-19-11w	•	3384
Broderick & Gordon, Selle 2, se nw sw 17-20-11w	3000	3293
Continental, Scheufler 4, sw nw nw 23-20-12w	809	3373
Butler County—		
B. V. Cox, Knollenberg 2 sw se se 18-29-4e	80	1920
Simpson et al, Owen 2, se ne ne 19-29-4e	25	1914
Cowley County—		
Ryan, Hunsaker 4, se nw ne 13-30-5e	309	2840
Ellis County—		
Champlin, Hadley "D" 7, c n½ ne sw 17-11-17w	3000	3430
Dickey, Kollman 6, c e½ se ne 18-11-17w	3000	3341
Cities Service, Collahan "B" 3, ne sw nw 25-11-17w	•	3758
Phillips, Sites 8, c s½ sw sw 12-11-18w	3000	3363
Ellsworth County—		
Pryor & Lockhart, Weisenthal 1, sw se ne 30-15-10w	•	3325
Continental, Ploog "A" 5, c sw 27-17-8w	3000	3243
Fuller 6, c se 28-17-8w	3000	3227
Greenwood County—		
Lewis & Dunne, Dawson 1, sw nw se 22-26-13e	20	1462
Bay, Adams 5, se sw ne 17-28-11e	50	1227
Harper et al, Jabes 3, nw ne nw se 17-28-11e	50	1223
Harvey County—		
Mercury Dr. Co., Dick 2, c n½ nw ne 19-23-3w	359	3360
Marion County—		
Ring-Mac, Scheck 2, nwc se 33-17-4e	330	2414
Pratt County—		
Skelly, West Maxedon 3, c n½ ne nw 25-27-11w	551	3491
Rice County—		
Continental, Ainsworth 7, sw nw se 24-18-8w	2538	3187
Ainsworth 8, sw ne ne 25-18-8w	3000	3187
Lansing "A" 7, ne sw sw 25-18-8w	554	3230
Wakefield et al, Smyres 1, c n½ ne se 35-19-6w	•	3348
McPherson, Grizzell "B" 1, se sw ne 8-19-9w	3000	3238
Shell et al, Cramm "A" 5, nwc ne 15-19-9w	6	3255
Derby et al, Dick 1, c w½ sw ne 21-20-9w	454	3272
Stormfeltd & Hyde, Specht 2, c w½ ne sw 16-20-10w	3000	3241
Rooks County—		
Ruse Dr. Co. et al, Dick 1, c w½ nw sw 21-10-19w	•	3827
Russell County—		
Coralena, Phinney 6, c n½ sw ne 30-14-13w	2611	2971
Shell, Sellens 5, sw ne sw 33-15-13w	3000	3348
Stafford County—		
Magnolia, Tretbar 5, c s½ se ne 12-24-11w	455	3749
Stanolind, Fitzgerald 3, c n½ ne se 22-24-13w	2200	4113
OLD WELLS DEEPENED		
Russell County—		
Skelly, Opdycke 7, c n½ se sw 29-14-13w (otd 2934½)	69	2993
Gurney 1, nec sw 23-14-14w (otd 3009)	60	3067
Stafford County—		
Derby et al, Roach 1, nwc se 12-22-14w (otd 3787)	•	3840

Kentucky

Butler County—		
W. Phillips, Gardner 1	•	515

South Louisiana

Acadia Parish (Richie)—		
Vincent & Welsh, McManus 2-A	47	3521
Avoyelles Parish (Eola)—		
S. W. Richardson, Haas D-2	210	11,517
Calcasieu Parish (Gillis)—		
Union Sulphur, Castle 13	145	7095
Cameron Parish (Chalkley)—		
Humble, Cameron Parish School Bd 6	421	8885
Cameron Parish (West Hackberry)—		
Stanolind, State 58	552	9619
Cameron Parish (Sweet Lake)—		
Pure, Yount-Lee 22	52	7685
Evangeline Parish (Ville Platte)—		
Continental, Ortego-Fontenot-Fontenot Unit 18	•	10,425
Danciger, Vidrine 5	•	10,211
Iberia Parish (Vermillion Bay)—		
Texas Co., State B-5	•	11,603
Jefferson Parish (Westwego)—		
R. E. Carter, Cravens 1	245	9755
Jefferson Davis Parish (Woodlawn)—		
Union Sulphur, Miller 5	•	10,141
La Fourche Parish (Golden Meadow)—		
Republic Pet. Co., Lefort A-1	195	5482
Epange 1	128	5202
Plaquemines Parish (Quarantine Bay)—		
Gulf, State QQ 28	343	8600
St. Martin Parish (Anse La Butte)—		
Glassell, Nickerson et al 1	•	4708
St. Martin Parish (Bayou Bouillon)—		
Superior, St. Martin Land Co. 1	•	9405
Plaquemines Parish (Bastian Bay)—		
Phillips, LL&E-State 1	•	12,280
Terrebonne Parish (Dog Lake)—		
Texas Co., LL&E 15	•	8736

North Louisiana

Bossier Parish (Sligo)—		
Triangle Dr. Co., Thigpen-Herold 3, 13-17n-12w	•	3165
Thigpen-Herold 5, 13-17n-12w	•	3185
Caddo Parish (Pine Island)—		
L. M. Bagley, Ober 1, 1-20n-16w	125	1550
Davis & Hart, Muslow B-4, 32-21n-15w	50	1533
Concordia Parish (Wildcat)—		
K. Hughes, Nelson 1, 34-9n-10e	•	2310
LaSalle Parish (Urania)—		
Lion O. R. Co., Goodpine 2, 25-9n-1e	•	1681
LaSalle Parish (Nebo-Jena)—		
H. L. Hunt, Goodpine A-16, 17-7n-3e	102	3475
LaSalle Parish (Olla)—		
Arkansas Fuel Oil Co., Mills 2, 13-10n-2e	•	2380
Placid Oil Co., Louisiana Cent. 64, 35-10n-2e	150	2449
Red River Parish (Wildcat)—		
Thornton & LaCroix, • Prudential Life Ins Co. 1 31-11n-9w	6	1317
OLD WELL DEEPENED		
Claiborne Parish (Lisbon)—		
Magnolia, Fowler 2, 32-21n-4w, (otd 5218)	•	5455

Michigan

Arenac County—		
Pure, Bryan B1, ne ne sw 22-19n-3e	•	3042
Clare County—		
Chapman Oil Co., Reger 1, c e½ se nw 3-17n-3w	•	4067
Sun, State A3, c s½ sw nw 36-20n-6w	640	3786
Gratiot County—		
C. M. Carother, Hawes 1, c n½ nw ne 17-11n-4w	•	3323
Lake County—		
Taggart Bros. Co., Campbell 8, nw ne ne 25-18n-11w	¶5.5	1246
Kent County—		
Hogan Bros. Zuidema 1, se se se 7-6n-12w	8	1804
Osceola County—		
Taggart Bros. Co., Jewett 7, c e½ 31-18n-10w	¶8.0	1237
RC-9, sw se se 31-18n-10w	•	1233
Ottawa County—		
Fisher-McCall, Boss B1, se nw ne 2-6n-13w	40	1812
Doyle 1, nw nw nw ne 12-6n-13w	15	1863
R. C. Lentz, Bliss 1, se se ne 6-8n-15w	•	1928
Van Buren County—		
J. H. Fitchett, Stasak 3, ne sw nw 7-1s-14w	75	1177

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New Mexico

Eddy County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Ajax Dr. Co., Saunders 2-B, sec sw 13-17s-27e	3	600
R. J. Johnson et al, Berrentos 1, sec nw 26-17s-27e	*	730
Sam Sanders et al, Berry 12, ne sw se 24-17s-27e	6	480
Neil Wills et al, Morris 2, ne nw sw 20-20s-30e	60	1507
Lea County (Eaves)—		
Stanolind, Farnsworth 6-A, se nw sw 18-26s-37e	1764	3010
Lea County (West Eunice)—		
Wilson Oil Co., State-Shell 10 c, ne ne 13-21s-34e	90	3750
Lea County (Halfway)—		
Argo Oil Corp., State 3, se ne nw 16-20s-32e	240	2681
Lea County (Maljamar)—		
Barney Cockburn et al, Pearsall 4-A, c ne nw 33-17s-32e	918	3955
Lea County (Penrose)—		
J. C. Clower et al, State-Humble 3, se ne ne 29-22s-37e	72	3690
Stampfli & Martin, Christmas-Repollo 1, swc ne 28-22s-37e	60	3688
Lea County (Rhodes)—		
Texas Co., Moberly 2-C, c ne se 21-26s-37e	31	3253
Lea County (Vacuum)—		
Phillips Pet. Co., State-Santa Fe 42, c se ne 26-17s-35e	167	4550

New York

Alleghany County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Franchot Oil Co., Murphy Farm, Bolivar	6	1433
Messer Oil Co., Miles farm, Bolivar	8	1434
Lester Young, Vincent farm, Scio	4	1055
N. V. V. Franchot, Reddy farm, Alma	8	1431
L. H. Thornton et al, Fassett farm, Willing	5	1348
Cam Oil Co., Peavy farm, Genesee	5	1389
Bradley Prod. Corp., Coats farm, Wirt	6	1366
Karl-Weller Oil Corp., Swarthout farm, Wirt	6	1366
Water Intake Wells—		
Alleghany County—		
Dick & Dillie, Bardeen farm, Wirt	...	1162
Bradley Prod. Corp., Duke farm, Alma	...	1454
Gordon & Short, Richmond farm, Willing	...	1180

Ohio

Ashland County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Price et al, Finley 2	3	768
Athens County—		
Ohio Fuel Gas, Swisher 2	¶0.2	1296
Ross, Weimer & Ross, Mansfield 1	¶0.07	1835
Mathews Oil Co., Marshall 1	¶0.04	1486
Coshocton County—		
Belmont Quad. Corp., Zimmer 1	*	1418
Ohio Fuel Gas, Winslow 1	*	3420
Fairfield County—		
City Nat. Gas, Upp 1	¶0.19	2430
Hocking County—		
Preston Oil Co., Sunday Creek Coal 190	*	3723
Jefferson County—		
R. J. Braden Co., Calvary Cemetery 18	1	1675
Knox County—		
Upham Gas, Busenberg 2	¶0.7	2871
Max Johnson, Wander 1	¶0.6	2850
Fisher et al, Hammer 1	¶0.6	2860
Licking County—		
H. C. Leightner, Reidenour 3	6	750
Jay Hunt, Ritter 1	¶1.5	2406
Everett Co., Mitchell 1	¶0.55	2386
A. Wiley et al, Samuelson 1	¶0.5	2381
Medina County—		
Marine Trust Co., Wertz 1-A	5	407
Wertz 16-A	5	434
Wertz 21-A	5	451
Wertz 25-A	5	448
Wertz 26-A	5	412
Wertz 27-A	5	434
Wertz 28-A	5	405
Fred C. Shaner et al, Hartman 1	1	440
Hartman 2	1	462
Thornton Prod. Corp., Sanford & Watson 21-F	1	357
Sanford & Watson 22-F	1	259
Sanford & Watson 23-F	1	382
Blizzard Oil Co., Grim 1	5	634
Preston Oil Co., Grim 1	5	567
Ohio Fuel Gas, Heilman 2	¶0.1	2698
Breyley 1	*	2716
Meigs County—		
Ohio Fuel Gas, Dean 1	¶1.7	1703
Monroe County—		
J. H. Weber, Frank 1	10	1205
Myers et al, Schwallie 1	¶0.04	1758
A. E. Robinson, Hogue 1	*	1400
Muskingum County—		
Mehowa O. & G. Co., Olden 1	¶1.0	4050
Noble County—		
Permian Gas Co., Hesson 1	¶0.28	1846
Tuscarawas County—		
Columbia Carbon Co., Sieber 1	¶0.25	4827
Washington County—		
Schneider Oil Co., Haynes 1	1	1414
Charles D. Togle, Fee 2	¶0.07	1110
Wayne County—		
Ohio Fuel Gas, Shaffer 1	¶0.85	3027
Wyandot County—		
Pure Oil, Kimmerly 1	*	1370
OLD WELL DEEPENED		
Tyree, Capehart 2 (otd 1871)	¶0.03	3347
WATER INPUT WELL		
Marine Trust Co., Wertz 15-A	...	428

Oklahoma

Bryan County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Pure, Little (106) 4, ne nw nw 34-5s-7e	1200	5077
Caddo County—		
Ray Stephens, Lankford 1, sec nw 6-6n-9w	*	5470
Palmer, Ulrey 4, sw nw ne 34-6n-10w	644	3370
Carter County—		
A. L. Tucker, Shores 2, nw sw 17-4s-2w	450	2064
Neustadt, Choate 2, s½ ne se se 18-4s-2w	780	2127
Choate (20) 1, nw nw 20-4s-2w	500	2102
Choate (20) 2, sw nw 20-4s-2w	460	1995
W. H. Smith, Ward 5, c se se 18-4s-2w	250	2166
Ward 6, sec 18-4s-2w	186	2098
Dixon et al, Woodsworth 2, nw ne nw nw 20-4s-2w	452	2021
Porterfield, Walker 5, ne ne nw 20-4s-2w (pb 1980)	120	2014
Creek County—		
Starr O. & G., Lumm 2, se nw se 8-14n-8e (pb 2470)	¶6.0	2857
Tibbens, Wilson 4-A, nw sw se 18-14n-9e	*	1386
Berry, Linihan 2, nec 31-15n-7e	150	4128
Leader, Vernon 1, ne se nw 30-19n-8e (pb 2647)	8	3756
Curtis, Coonrod 1, ne se ne 9-19n-9e	35	2084
Garvin County—		
Kerlyn, Butterfly 1, nw ne sw 23-1n-1e	*	3505
Jackson County—		
C. O. Doss, Robinson 1-A, se ne nw se 15-1n-20w	*	1605
Robinson 3, sw nw se 15-1n-20w	92	1413
Kiowa County—		
Hurst et al, Groth 2, se swc 3-4n-16w	*	425
Shell, Kelsey 3, ne nw sw 20-7n-17w	420	1136
Logan County—		
Champlin, Knecht 1, nec nw 21-18n-4w (pb 3478)	¶5.5	4011
Kerlyn, Cye 1, c se ne 33-18n-4w (pb 4226)	¶6.0	4903
Marshall County—		
Pure, Thompson (206) 1, swc 21-5s-7e	270	5056
Okfuskee County—		
Shell, Hicks 1, sw se ne 35-11n-8e	153	3423
Taylor 2, se sw sw 26-12n-8e	943	3645
K. G. F. F. Oil Co. et al, Camp 1, swc 6-11n-9e	195	4010
Phillips, Joney 3, sw ne ne 34-12n-8e (pb 3694)	120	3700
Droppleman, Dill "B" 3, ne sw sw 35-12n-8e	350	3568
Titus et al, Miller 1, nw ne sw 35-12n-8e	*	3712
Miller 2, sw ne sw 35-12n-8e	*	3762
Oklahoma County—		
Dorr & Ragsdale, Riely 1, nec se 34-13n-1e	*	5921
Okmulgee County—		
C. C. Allemy, Rentie 1-A, ne ne sw sw 11-15n-14e	*	1215
Klingensmith, Grayson 22, sw ne nw 35-16n-11e	5	1975
Osage County—		
Johnson O. & R. Co. 1, nwc se 31-22n-9e	*	1380
Blackwell, No. 8, nw ne nw 10-28n-11e (pb 956)	85	962
Payne County—		
H. & H. Oil Co., Linsenmeyer 1, sec sw 3-18n-4e	*	3956
Pontotoc County—		
Norville, Schaupp 1, c sw sw 24-5n-6e (pb 1975)	¶18.0	2097
Pottawatomie County—		
Parker Dr. Co., Fidler 1-A, se ne ne 9-5n-5e	*	2789
Kerlyn Johnson 1, ne se se 23-6n-4e	*	3090
R. H. Vise, Richardson 4, nw se sw 16-7n-4e	35	3526
Seminole County—		
Seiboldt, Boren 1, sw se sw 34-6n-6e	*	3564
Wood, Reardon 1, se sw ne sw 28-9n-6e	75	2601
Amerada, Karr 2, c s½ ne sw 30-9n-6e	112	4260
Bryan, Wisey 1, ne se se 5-11n-8e	*	3702
Stephens County—		
Clark & Cowden, Simpson 11, sw nw se nw 11-1n-5w	*	1569
Gulf, Krieger 1, c e½ ne sw 3-2n-5w	*	6271
Wagoner County—		
Midco, Porter 1, sw nw se 23-17n-15e	*	1134
OLD WELLS DEEPENED		
Jackson County—		
Aloma, Robertson 4, sw ne se 15-1n-20w (otd 1372)	15	1477
Osage County—		
M. & T. Oil Co. 3, nw sw se 30-22n-9e (otd 514)	3	531
Pawnee County—		
Magnolia, Fugate 4, nw nw se sw 9-20n-6e (otd 3095)	15	3103

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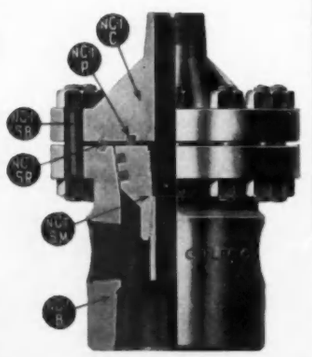

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Company, Well and Location	Init. Prod. Bbls.	Depth
Pottawatomie County—		
Denver P. & R. Co., Richards 2, c n½ ne ne 2-6n-4e (otd 4220)..	70	4277
Magnolia, Wilborn 6, ne sw se 24-7n-4e (otd 4380)	15	4500
Stephens County—		
Cities Service, Surber 33, ne ne sw sw 33ls-8w (otd 1678).....	113	2293

Pennsylvania

BRADFORD DISTRICT

Messer Oil Corp.....	1½	...
Bradford Transit Co., 17 wells....	17	...
Forest Oil Corp.....	1	...
Niagara Oil Corp., 2 wells.....	2	...
E. H. Culbertson Wright.....	2	...

NEW YORK-PENN GAS FIELD

Hanley & Bird, Jermain.....	¶	...

MIDDLE DISTRICT

Clarion Co. Nat. Bank, Carson....	1	...
Duke & Buck, Duke.....	2	...

SOUTHWEST DISTRICT

Armstrong County—		
Peoples Nat. Gas, Boyer 2.....¶	0.02	3724
Greene County—		
Greensboro Gas, Longenecker 1...¶	0.16	3095
Washington County—		
Union Gasoline & Oil, Craft 4....	20	2812

WATER INTAKE WELLS

Bradford District—		
N. V. V. Fanchot, Campbell.....	...	...
Forest Oil Corp.....	...	...
Forest Pet. Corp.....	...	...
Niagara Oil Corp.....	...	...
G. Van Vechten & Son, Tarr.....	...	...

West Central Texas

Burnett County (Wildcat)—		
Al Belanger et al, Evans 1.....	*	966
Callahan County (Wildcat)—		
J. L. Reeves & W. F. Sorrell, Young 1	*	2000
Callahan County—		
Earl Johnson et al, Hickman 5....	*	477
Jones County—		
Danciger O&R, Inc., Kelso 2 (new pay)	102	2746
Fain-McGaha Oil Corp., Akard 2..	92	2150
Shackelford County—		
Gorsuch Oil Co., Fee 2-B.....	*	1540
Stephens County—		
Aragon Oil Co., Mueller 2.....	8	3540

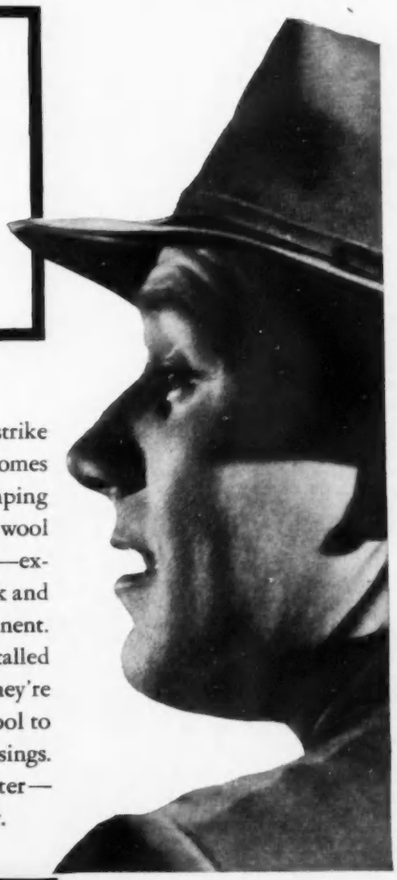
Texas Gulf Coast

Brazoria County (Old Ocean)—		
Shell, Evans 1.....	409	10,860
Stanolind, Giles 4.....	444	11,018
Chambers County (Anahuac)—		
Humble O&R Co., Johnson 35....	597	7227
Fort Bend County (S. Thompson)—		
John H. Blaffer, Davis 1-B.....	116	5445
Galveston County (Caplen)—		
Sun, Zinn & Forman 7.....¶...		7836
Harris County (Humble)—		
J. A. Young, Mason 2.....57.5		1747
Harris County (Tomball)—		
Humble, Reid 24.....	359	5559
Jefferson County (Wildcat)—		
British American et al, State 2-71	291	6721
Jefferson County (Lovell Lake)—		
Humble, Steinhagen C-1.....	105	7806
Liberty County (Old Hull)—		
Republic Prod. Co Fee 168.....	21	2374
Liberty County (Hardin)—		
Woodley & Pan American's Humphrey's 3	157	7658
Liberty County (S. Esperson)—		
W. P. Luse, Hlavaty 5.....	178	7053
Matagorda County (Wildcat)—		
Stanolind, Huebner 1.....	75	10,500
Matagorda County (Markham)—		
Thomar O. Co., Sisk et al 3.....	384	3166
Tyler County (Spurger)—		
Republic et al, Sterne Fee 7.....	*	4925
Wharton County (Wildcat)—		
Texas Progress Oil Co., Sedlack 1	*	6010
Wharton County (Magnet)—		
Humble, Cockburn Fee 40.....	105	5533

West Texas

Cochran County (Slaughter)—		
Osage Dr. Co., Moore-Honolulu 3-B	513	5063
Moore-Honolulu 4-B	447	5054
Crane County (Ella Waddell)—		
Gulf, Waddell 38 (pb to 3420 ft)..	162	3662
Crockett County (Crockett)—		
Lu-Tex Oil Co., University 5-17....	96	1643
Crockett County (Soma-Noelke)—		
Atkins-Pittman & Hefner, Bouscaren 1	*	1705
Dave Elder, Tr., Noelke 1.....7200		1146
J. T. Holmes et al, Noelke-State 1.6144		1157
Ector County (Embar)—		
Phillips, Codwen-Embar 3.....	113	4279
Ector County (Foster)—		
Carlos Oil Corp., Johnson-Ohio 1..	331	4150
C. O. Davis et al, Judkins-Atlantic 1 1162		4335
Gerhig Co. of Texas (was C. A. Everts), Gist 2.....	243	4314
Ector County (Jordan)—		
Atlantic Ref. Co., University 1-F..	121	3620
Ector County (North Cowden)—		
Stanolind-M. J. Delaney, Smith 10-A	97	4400
T. P. Coal & Oil Co., Holt 9.....	718	4580
Gaines County (Seminole)—		
Magnolia-Atlantic, H. & J. 12-195..	400	5255
H. & J. 8-221.....	249	5259
Ohio Oil, Tippett 7.....	759	5271
Osage Dr. Co., Crain-Shell 2.....	514	5365
Hockley County (Slaughter)—		
Fain & Riner, Soash 3.....	519	4960
Honolulu Oil Corp., Slaughter 2-A-4	687	4990
Magnolia, Slaughter 3.....	652	4985
Sid Richardson et al, Coe 2.....	869	4987
Slaughter 11, Lab 58.....1074		4985
Slaughter 6-B, Lab 42.....	679	4985
Tide Water, Pirkle 1.....	507	4990
Loving County (Wildcat)—		
H. C. McCauley et al, Hall 1.....	*	4820
Mitchell County (Wildcat)—		
Hal Peck-Croft & Jarrett, Smith 1.	*	3423
Pecos County (Taylor-Link)—		
Landreth Pro. Corp., University 1-L	182	1695
Pecos County (Walker)—		
Childress Roy. Co., White-Baker 1-B	55	2096
Shasta Oil Co., White-Baker 4....	72	1998
Upton County (McCamey)—		
Trebol Oil Co., Rodgers-Shell 2....	457	2710
Yoakum County (Wasson)—		
Continental, Stevens 8.....	916	5201
Denver Prod. & Ref. Co., Whittenburg 14-A	821	5126
Shell, Baumgart 13-B.....1507		5179
Sinclair Prairie, Willard 3.....	846	5285
T.P. Coal & Oil Co., Hall 6.....	940	5200

"ANY DRILLER'S FOOLISH NOT TO BE READY FOR BOTTOM WATER!"



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Eagle Dreadnaught—for extreme speed and pressure conditions

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Eagle Durable—for low speed and pressure conditions

United States Well Completions—*Continued*

Southwest Texas

CORPUS CHRISTI DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Goliad County (Weser)—		
W. R. Davis Co., Albrecht 2-c....	*	8526
Jackson County (Cordele)—		
Froust & Dunnam, Pressly, new sand	650	2747
Jackson County (La Ward)—		
Humble, Bonnet 2, 1½ mi sw field	*	5425
Jackson County (Lolita)—		
Walter Goldston, Missouri Pacific 4	350	6397
Humble, Ranch 13-A	950	5280
Luling O. & G. Co., Johnson 1....	350	5040
Magnolia, Mitchell 14	825	5296
Pat R. Rutherford, Moody Unit 1	400	5944
Jackson County (West Ranch)—		
W. Stewart Boyle, L Ranch 4....	600	5503
Humble, Menefee Bayou-State 2-B.	1100	5756
Magnolia, Bennett-Fee 8	450	5771
West 136-A	850	5765
West 140-A	500	5586
W. R. R. Oil Co., State 7	900	5814
Jim Wells County (Orange Grove)—		
Magnolia, Schmidt 8	*	6014
Jim Wells County (Wade City)—		
A. R. Quin, Laging 1	225	4800
Nueces County (Agua Dulce)—		
C. Pete Burton, Mounger 2	750	6458
Richardson Pet. Co., McCoay 6..	124	7065
Nueces County (Clara Driscoll)—		
Magnolia, Driscoll Sevier 6.....¶74.0		5386
Nueces County (W. White Point)—		
W. R. R. Oil Co., State-Nueces Bay 8 (973)	500	5840
Nueces County (Luby)—		
Seaboard Oil Corp. of Dela., Luby 1, 3000 ft w field	*	5194
Nueces County (Minnie Bock)—		
Sun, Robertson 2	150	3820
Windsor Oil Co., Howze Est. 7....	75	3860
Nueces County (Stratton)—		
Southern Min. Corp., Sellers 8....	500	6617
Refugio County (McFaddin)—		
Barnesdale, Marberry 6	450	5304
Refugio County (Tomoconnor)—		
Quintana Pet. Corp., Claude Heard 19	1250	5925
San Patricio County (E. White Point)—		
Houston, Fee	500	5900
San Patricio County (Midway)—		
British American, Ivey 2	500	5422
Gibson Oil Corp., Floerke 8	400	5351
Victoria County (Coletta Creek)—		
Albert Plummer, Terrell 5-B.....	75	2828
Victoria County (Heyser)—		
Gulf, Traylor 52-B	500	5485

LAREDO DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Duval County (Wildcats)—		
Henderson Coquat, Garcia 1, Sefita pros.	*	5515
L. A. Douglas & Cartter, Driscoll 1, 16 mi nw Benavides	*	2316
Magnolia, Well 3 (1-563), 1 mi w Hoffman fld	*	3254
Jim Hogg County (Colorado)—		
A. Andrade III, Trevino 2-G.....	250	2924
Humble, Atwood 29	275	3132
King Ranch, Colorado 11-B.....	500	2964
V. F. Neuhaus, Trevino 5-A.....	400	2963
Jim Hogg County (Wildcat)—		
Sal Bleja Oil Co., Pena 2, 22 mi sw Hebbronville	*	3206
Star County (Kelsey)—		
Humble, Miguel Juarez et al 1....	*	4819
McGill Bros. 82	350	4759
Starr County (Rincon)—		
Continental, Slick Est. 20-A.....	350	5673
Slick Est. (State) 43-B.....	500	4162
Starr County (Sun)—		
Nueces Roy. Co. et al, Olivarez 1..	250	5210
Starr County (Samfordyce)—		
Phillips, Elizando 1	150	3531
Starr County (Rio Grande City)—		
Sioux Oil Corp., Goodrich & Wood 10	75	1376
Sun, Spear-State 5-B	500	4967
Webb County (Glen)—		
Lopez Est. 60	150	2567
Interstate Minerals Inc., Lopez 61.¶10.0		2145
Lopez 62	¶10.0	2147
Transwestern, Yeager & Strohman 11	84	2196
Yeager & Strohman 12	125	2182
Webb County (Killam)—		
O. W. Killam, Garcia 9	...	...
Webb County (Wildcats)—		
Transwestern, Garza Est. 1, 1 mi e Carolina, Texas fld.	*	2400
Zapata County (Escobas)—		
Dulup Oil Co., Garcia C-5, new sand	5	448
Zapata County (Glen)—		
Buffalo Oil Co., Robert Hinnant 2-F	3	2175

SAN ANTONIO DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Bexar County (Gas Ridge)—		
Leavitt Corning, Jr., Bitter 1, 1 mi sw fld.	2	554
Southwest Dr. Co., Covell et al 12	2½	430
Covell et al 16	2½	450
Williamson, (Thrall)—		
Magnolia, Stiles 74	6	903

East Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
Retsal Dr. Co., Rollins 8 (22-ac)..	1500	3617
Tide Water, Thompson 13-A (74¾-ac)	960	3672
Kilgore Area—		
Thos. Humphrey et al, Spear 29 (20.37-ac)	750	3565
Spear 30 (20.37-ac)	1200	3568
Magnolia, Hale 13 (50-ac)	80	3565
Shell, Watson 92 (385.2-ac)	3600	3708
Sinclair Prairie, King 28-B, Tr 5 (147-ac)	3000	3471
Longview Area—		
Deep Rock Oil Corp. et al, Pritchard 21 (110-ac)	6000	3575
General Amer. Oil Co., Adams 29 (102.65-ac)	3600	3594
General Crude Oil Co., Fee 6 (7.74-ac)	1200	3498
Magnolia, Free 38 (169.3-ac)	960	3700
Margay Oil Corp., Victory 20 (87-ac)	2400	3605
Mudge Oil Co., Richardson 15-A (92½-ac)	2500	3712
Stanolind-Falcon Co., Cannon 3 (37-ac)	750	3584
Anderson County (Cayuga)—		
Carter-Gragg Oil Co., McMahon 3	164	4017
Anderson County (Long Lake)—		
Tide Water & Seaboard, Monnig 10	47	5265
Franklin County (Talco)—		
Humble, Penn-Humble 23	585	4283
Freestone County (Wortham)—		
Barney Carter et al, Calme 1	120	3014
Crouch 1	140	2996
Finch 1	45	2946
Henderson County (Opelika)—		
Lone Star Gasoline-Shamrock, Magers 1	¶78.0	8217
Wood County (Hawkins)—		
Cable Tool Dr. Co., Negro School 1 (2-ac)	450	4843
General Amer. Oil Co., Giles 1, lot 5	466	4836
Smith 1, Lots 24-25	480	4939
Humble, S. H. Moore 1 (66½-ac)	355	4812
H. W. Stoddard et al, Hawkins Cemetery 1	533	4783

North Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County (Wildcat)—		
Magnolia, Hayter 1	*	5416
Archer County (Hull-Silk Deep)—		
Chapman & McFarlin, Wilson 9-D.	952	4642
Archer County (Hull-Silk)—		
Barnes & Traugh, Carson 3	1080	4385
J. A. Chapman et al, Wilson 2....	648	3800
Archer County (K-M-A)—		
C. H. Staley et al, Mangold 21....	504	3840
Archer County—		
C. T. Hedges et al, Harmel 20-C..	9	1285
Pet. Producers Co., King 4	156	1243
Baylor County (Rendham)—		
Hall-Jordan Oil Co., Fayette 1....	354	3038
Fayette 3	360	3029
Baylor County (Mabelle)—		
British-American O. P. Co., Turbeville 7	410	2509
Clay County (Ross-Jolly)—		
R. H. Dearing & Son, Hatfield 1 (pb to 5582 ft)	20	5801
Clay County (Wildcat)—		
L. W. Stanford et al, Edrington 1-A	*	1239
Clay County—		
F. H. Gohlke et al, Jones 1-A	*	1725
Geo. W. Graham et al, Hansard 2..	87	1137
McElreath & Suggett, Turner 2....	*	252
Perkins-Cullum, Taylor 2-A	95	1073
Underwood Oil Co., Taylor 1	*	1352
Cooke County (Walnut Bend)—		
Sinclair Prairie, Atkins 3 (pb to 4823 ft)	184	5084
Cooke County—		
C. J. Bohner et al, Linn 3	44	1140
Sicking 4	105	1293
Eberhart & McClure, Becker 1....	*	1411
Harvey Dr. Co., Sicking 5	258	1204
Kewanee Oil Co., Timmis 15-B....	15	1570
Metzner & McKee, Henscheidt 4...	20	800
Mudge Oil Co., Johnson 27	40	1197
J. C. Roberts et al, Sicking 4....	140	1316
Texas Co., Trubenbach 25	53	786
Whitfield-Pearson-Grimes, Sicking 9	165	1271
Sicking 10	264	1263
Cooke County (Wildcat)—		
E. C. Gannon et al, Trew 1	*	1226
Jack County—		
Buttram Pet. Corp., Preston 8....	22	2013
Continental Oil Co., Mathis 1	*	3023
Forbess & Rochell, Carter 3	*	600
Trentman-Nunnellee-Showers, Owens 5	*	3300
Throckmorton County (Wildcat)—		
A. B. Bissey et al, May 1	*	350
Throckmorton County—		
Combined Oil Co., Housley 1	10	658
McKeichan 1	*	827
Cross & Peterman, Harrell 1	12	605
Wichita County (K-M-A Ellenberger)—		
Consolidated Oil Co., Ferguson 24..	871	4262
Wichita County (Asylum)—		
Pet. Producers Co-Conoco, Leath 1	*	5225
Wichita County (K-M-A)—		
High Point Oil Co., Burnett 3-B..	400	4138
Hanlon & Buchanan, Burnett 1-C	224	4152
Tide Water et al, Ferguson 23....	528	3835
Pettit 27	600	3893
Wichita County—		
F. A. Dickinson et al, Fee 17	10	780
Magnolia, Hamilton 30 (pb 606 ft)	6	1040
Thos. E. Nix et al, Herron 1	*	1269
W. E. Prod. Co., Glass 6	30	1327
Glass 7	45	1322
Wilbarger County—		
W. B. Omohundro et al, Waggoner Est. 4	10	1117
Young County—		
R. T. Coley et al, Wolverton 1....	*	1001
W. H. Dyer et al, Cheney 1	40	4250
D. B. Holland et al, Belknap Coal Co. 1	*	725
Hortwitz & Oldom, Graham 19....	24	585
E. D. Willis et al, Stewart 12-B..	*	901
Stewart-Zinn 1	18	860
Henry Zweifel et al, Vaughn 2-D.¶10.0		4087

WATER INTAKE WELL

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County—		
Cable Oil Co., Webb 19	*	707

Texas Panhandle

Company, Well and Location	Init. Prod. Bbls.	Depth
Gray County—		
Danciger O&R, Inc., Powell-Beck 20	119	2870
W. D. Kelly et al, Hood 2	423	3074
Southern Pet. Explo. Co., Vaughn 13	155	3227
Hutchinson County—		
Holmes et al, Moore 2-B	321	3115
McIlroy Oil Co., Tomlinson 6....	243	3178
Parton & Holt, Whittenburg 5....	106	3097
Harry Stekoll et al, Whittenburg 5-K	66	2925
Whittenburg 8-M	27	3068

West Virginia

Company, Well and Location	Init. Prod. Bbls.	Depth
Boone County—		
Hope Nat. Gas, Nunnencamp 8505	¶0.75 & 25	3177
Braxton County—		
Pitts. & W. Va. Gas, Boggs 7789.¶....		1600
Boggs 7788	¶0.27	1598
Cabel County—		
Merrits Creek Gas Co., Arn 1....¶0.07		3225
Calhoun County—		
McCall Dr. Co., Smith 1.....¶0.03		1773
Harrison County—		
Eagle Gas Co., Husted 1.....¶0.12		2564
Jackson County—		
Columbia Carbon, Kiser et al 1..¶17.0		5124
United Fuel Gas, Sheer 4982....¶4.48		5251
Logan County—		
South Penn, Yawkey-Freeman 61.¶0.49		3240
Pleasants County—		
Bonar & Coffman, Fleming 2....¶0.2		2067
Putnam County—		
Parr Gas, Mabe et al 1.....¶0.18		1568
Upshur County—		
Pitts. & W. Va. Gas, Betts 7763..¶0.06		4750
Wetzel County—		
Hope Nat. Gas, Barr 1	5	2000
Manufacturers Lt. & Mt., Parson 1	*	3114

OLD WELLS DEEPENED

Company, Well and Location	Init. Prod. Bbls.	Depth
Lincoln County—		
Russell Gas, Stump 2 (otd 2266)..¶0.07		3580
Putnam County—		
Randolph Gas, Rupe 2 (otd 1720)..¶1.0		1763

*Failures; †Junked; ¶Million cu. ft. gas.

Order 20-Acre Spacing for Lupton-McLester Field

Standard 20-acre spacing and 20-acre proration units for wells in the Lupton-McLester field, Young County, is provided in a new Texas Railroad Commission order. Proration is on acreage and per well, with 50 percent allocated on each factor.

A maximum of 40 acres may be assigned to one well for proration purposes, if the unit is no more than twice as long as it is wide.

Rules call for 50 feet of surface casing cemented to the surface, and an oil string cemented 300 feet above the shoe.

WILDCAT REPORT
New Starts and Completions

CALIFORNIA
FIRST REPORTS

Fresno County—Shell's Properties Inc. 8-18; sec 18-15-18, lcn, Raisin City area.

Kings County—S. F. Easterbrook's No. 1, sec 11-23-16, lcn, Reef Ridge area.

Los Angeles County—Cherokee Oil Co.'s No. 1, sec 32-3-14, lcn, Redondo area. J. F. Wilcox's No. 1; se Willow & Main sts, lcn, Wilmington-Torrance area.

Santa Barbara County—Texas Co.'s Bishop A-3, sec 13-4-29, lcn, Elwood area.

Ventura County—Chob Oil Co.'s Phillips 1, sec 24-4-20, lcn, Sespe area. Vauchn Maynard's Maynard 1, sec 18-4-19, lcn, Sespe area.

IOWA
FIRST REPORT

Fremont County—Ohio Oil's Wisnom 1, c nw ne 23-68n-41w, dr.

KANSAS
FIRST REPORTS

Greenwood County—H. Brinegar et al's Kellar 1, nwc se 28-26-13e, mch. Octava-Le-Blanc Oil Co.'s Mitchell 1, nw sw se 20-27-12e, lcn.

McPherson County—Westgate - Greenland Oil Co.'s Chindberg 1-A, c w½ nw se 18-18-1w, dr.

Norton County—Barnsdall Oil Co.'s Rumsey 1, c ne nw 35-1s-21w, lcn.

Pratt County—Aladdin Pet. Corp.'s Reschke 1, c w½ sw sw 18-27-13w, lcn.

Stafford County—Stanolind's Hill "B" 1, c n½ ne nw 11-23-12w, spd. W. W. W. Dr. Co. et al's Wilson 1, c w½ nw nw 5-25-14w, dr.

COMPLETIONS

Greenwood County—Hughes et al's McVay 1, nw se ne ne 34-26-13e, 1½ mi e Brinegar pool, abnd 340 ft.

Jefferson County—McCain & Sherrod et al's Green 1, swc nw 9-11-19e, 8 mi sw Oskaloosa pool, Mississippi 1535 ft, abnd 1685 ft.

McPherson County—Rocket Dr. Co. et al's Miller 1, c w½ sw se 12-17-1w, 4 mi w Roxbury pool, Topeka 1725 ft, Lansing 2250 ft, Mississippi 2872 ft, abnd 2903 ft.

Rice County—Sharon Dr. Co. et al's Nevious 1, swc ne 21-19-10w, revived Bowman pool, Lansing 2963 ft, perf 30 shots 3032-40 ft, pay 3040½-42 ft, 500 gals acid, 530 bbls, 40.8-gr, top Arbuckle 3273½ ft, td 3298 ft, 103 bbls, 42.1-gr, producing two zones.

Russell County—Continental's Sibrava 1, ne sw ne 34-13-13w, 6 mi e Russell pool, Anhydrite 775 ft, Topeka 2680 ft, Lansing 2986 ft, Sooy 3294 ft, Arbuckle 3323 ft, abnd 3344 ft. Central Pet. Co.'s Zeman 1, swc ne 16-15-12w, 2 mi s Greenvale pool, Dodge 2901 ft, Lansing 2965 ft, hfw 3078-3100 ft, Sooy 3254 ft, Arbuckle 3292 ft, abnd 3304 ft.

SOUTH LOUISIANA
FIRST REPORT

Rapides Parish—Chamblee & Pitts' Lee Lbr. Co. 1, S. Catahoula Lake area, sec 6-5n-3e, dk.

COMPLETION

Plaquemines Parish—Phillips LL&E-State 1, Bastian Bay area, sec 48-20s-29e, sw, abnd 12,280 ft.

NORTH LOUISIANA
FIRST REPORTS

Union Parish—Louark Prod. Co.'s Farley 1, c ne sw 10-20n-1w, mat.

Caldwell Parish—V. V. Ryan et al's La. Cent. Lbr. Co. 2, c nw ne 33-13n-4e, lcn.

Franklin Parish—J. M. Rush's Moore 1, nw nw ne 13-11n-6e, coring 3500 ft.

Morehouse Parish—Union Prod. Co.'s White 1, nwc 37-20-6e, mat.

COMPLETIONS

Concordia Parish—K. Hughes' Nelson 1, se nw se 34-9n-10e, abnd 2310 ft.

Red River Parish—Thornton & LaCroix, Prudential Life Ins. 1, sw sw nw 31-11n-9w, pumped six bbls oil daily, td 1317 ft (Nachatoch).

MISSISSIPPI
FIRST REPORT

Noxubee County—P. J. Lunati's Fee 1, sw se 31-3s-1w, 8¼-in csg 160 ft, dr 1000 ft in shale.

MICHIGAN
FIRST REPORTS

Clare County—Union Dr. and Prod. Co.'s O'Brien 1, c s sw se 5-20n-5w, mim.

Ottawa County—Smith Pet. Co.'s Feichtinger 1, ne ne nw 6-7n-14w, dr.

Roscorron County—Eugene Hilliard's State A-1, c s se se 34-21n-3w, mim.

COMPLETIONS

Clare County—Chapman Oil Co.'s Reger 1, c e se nw 3-17n-3w, Dundee, 3288 ft, abnd 4067 ft.

Gratiot County—C. M. Carother's Hawes 1, c n nw ne 17-11n-4w, Dundee 3258 ft, abnd 3323 ft.

Ottawa County—R. C. Lentz's Bliss 1, se se ne, 6-8n-15w, Traverse 1777 ft, abnd 1928 ft.

NEBRASKA
COMPLETION

Cass County—Golden Rod Oil Co.'s Fleming 1, c n½ ne ne 20-11n-13e, 9 mi sw Plattsmouth, Viola 1131 ft, abnd 1160 ft.

NEW MEXICO
FIRST REPORT

Sandoval County—Sieman & Boyd's Armijo 1, c se sw 1-12n-3w, so 711 ft, sd 715 to run pipe.

OKLAHOMA
FIRST REPORTS

Caddo County—Texas Co.'s Smith 2, c se nw 2-5n-12w, dr.

Comanche County—Roy E. Cooper's Bowen 1, se nw se 29-2n-9w, dr.

Choctaw County—C. F. Carter's Shull 1, c se sw ne 20-6s-18e, dr.

Jackson County—Kerbow & Britton's Moon 1, se sw ne 31-1n-19w, rig.

Logan County—Big Chief Dr. Co. et al's Hirzel 1, ne nw se 18-17n-1w, dr.

Love County—N. H. Martin's Porter 1, sw ne se 19-6s-3w, lcn.

Okfuskee County—Sunray Oil Co. et al's Spillman 1, sw nw nw 4-10n-9e, dr.

Seminole County—Eagle Oil Co.'s Mann 1, sw ne ne 31-7n-7e, dr.

COMPLETIONS

Lincoln County—K. G. F. F. Oil Co. & Port-

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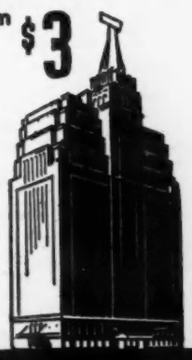

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able Dr. Co.'s Adams 1, sw nw nw 3-14n-4e, 1¾ mi ne Chandler pool, Pawhuska 1040 ft. Hogshooter 2785 ft, Checkerboard 3115 ft, Cleveland 3150 ft, Oswego 3850 ft, Prue 3860 ft, Skinner 4050-90 ft, Brown lime 4400 ft, Mayes 4510 ft, Woodford 4747 ft, Hunton 4795 ft, Sylvan 4845 ft, Dense 4965 ft, Dolomite 4980 ft, first Wilcox 5005 ft, second Wilcox 5045 ft, abnd 5059 ft.

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Okfuskee County—K. G. F. F. Oil Co. & Portable Dr. Co.'s Camp 1, swc 6-11n-9e, 1¾ mi e Dill pool, new pool, Oswego 1668 ft, Calvin 1730 ft, Henryetta Coal 2105 ft, Senora lime 2200 ft, Allen sd 2215 ft, Earlsboro 2489 ft, Inola 2698 ft, Salt sd 2745 ft, Brown lime 2905 ft, Booch 3070-90 ft, Gilcrease 3239-49 ft, Unconformity Cromwell 3410 ft, Fayetteville 3550 ft, Mayes 3765 ft, Woodford 3890 ft, Hunton 3915 ft, perf 41 holes 3950-60 ft, td 4010 ft, 195 bbls, 43.5-gr, J. O. Hayes Dr. Co. et al's McKernan 1, c e½ sw nw 25-12n-8e, 2 mi ne Dill pool, Wapanucka-Cromwell 3535 ft, Woodford 4035 ft, Hunton 4064 ft, Sylvan 4102 ft, Viola 4188 ft, Dense 4214 ft, Dolomite 4215 ft, first Wilcox 4235 ft, second Wilcox 4246 ft, abnd 4270 ft.

Pawnee County—Malernee Oil Co.'s Lucas 1-A, nw se nw 28-21n-8e, Cleveland District, Broken sd 1670 ft, base sd 1868 ft, Layton 1412-25 ft, Cleveland 1670-1868 ft, Skinner 2280-2300 ft, Bartlesville 2444-2540 ft, Mississippi lime 2640 ft, Chattanooga 2775-2804 ft, Sylvan 2804-44 ft, first Simpson sd 2844-50 ft, green shale 2850-56 ft, sandy lime 2856-66 ft, second Simpson sd 2866 ft, abnd 3030 ft in Arbuckle lime.

Seminole County—Seiboldt Dr. Co.'s Boren 1, sw se sw 34-6n-6e, 2 mi se Konawa pool, Calvin 1445 ft, Senora lime 1710 ft, Cromwell 2130-60 ft, Mayes 2505 ft, Woodford 2775 ft, Hunton 3045 ft, Sylvan 3247 ft, Dense 3340, Dolomite 3381 ft, first Wilcox 3445 ft, second Wilcox 3547 ft, abnd 3564 ft.

Wagoner County—Garrett et al's Kyle 1, nw se ne 10-19n-15e, 1½ mi n Bilby pool, abnd 875 ft.

NORTH TEXAS
FIRST REPORTS

Archer County—J. R. Jones et al's Jones 1, se cor blk 103, Jefferson SCL sur, lcn. United Producers Co.'s Beardon 1, J. Riley sur, A364, lcn.

Young County—G. J. Scholl et al's Howard 1-A, TE&L sec 1461, lcn.

COMPLETIONS

Archer County—Magnolia's Hayter 1, sec TE&L sec 2415, Canyon 1680 ft, Palo Pinto 3067 ft, Bend series 4660-4710 ft, Marble Falls 4765 ft, Mississippian 5210 ft, Ellenberger 5396 ft, abnd 5416 ft.

Clay County—L. W. Stanford et al's Edrington 1-A, ne part F. W. Grassmeyer sur A-894, abnd 1239 ft.

Cooke County—E. C. Gannon et al's Trew 1, M. Langham sur A-564, abnd 1226 ft.

Throckmorton County—A. B. Bissey et al's May 1, sw¼ TE&L sec 916, abnd 350 ft.

SOUTHWEST TEXAS
FIRST REPORTS

Bee County—Lewis Prod. Co.'s McKinney 1, L. C. Randolph sur, 2 mi s Pettus, prep to mi.

Guadalupe County—A. J. Hollifield's Willman 1, Mich Miller sur, 2 mi nw Kingsbury, sp.

Jackson County—Humble's Bonnet 1, Benjamin J. White lge, 3225 ft w La Ward field, lcn. Moore & Ahern's Janica-Toney 1, Sec 1 Morris & Cummings, 1½ mi sw Ganado fld, ru.

Jim Hogg County—Sun's East 2, La Maria de Santa Domingo Gr., lcn.

McMullen County—A. Van Dresar's Brown 6, R. H. Brown sur 54, 1½ mi n Crowther, lcn. C. E. Yoakum & J. W. Gorman Co.'s Ferguson 1, BS&F sur 104, 25 mi ne Freet, lcn cleared.

Refugio County—Southern Minerals Corp.'s Boenig et al 1, ¾-mi nw No. 1 disc, Woodsboro fld, dr 3425 ft.

Starr County—Sun's Virginia Chapa de Vela 2, por 91, 1 mi sw Boyle fld, lcn.

Webb County—Durbin Bond's Lewis 1, sec 640, 1 mi w Mirando City, lcn.

Zapata County—Martin-Baker, Tr's Serapio Vela 3, Sh 2, El Grullo gr, 25 mi ne Lopena, lcn.

COMPLETIONS

Bexar County—Leavitt Corning Jr.'s Bitter 1, Bererra sur, one mi sw extension to Gas Ridge fld, comp. 554 ft for 2 bbls on pump, 7-inch csg 475 ft.

Duval County—Henderson Coquat's Garcia 1, Concepcion gr, se of Sejita fld, abnd 5515 ft. L. A. Douglas et al's Driscoll 1, se ne Sec 61, abnd 2316 ft.

Goliad County—W. R. Davis, Inc.'s Albrecht 2-C, at Weser, abnd 8526 ft in Wilcox.

Jackson County—Frost & Dunham's Pressly, at Cordele, comp 20 bbls ¼-in ch, tp 400 lbs, cp 75 lbs, gr 21, water none, gor, low, sand 2742-47 ft, new sand. Humble's Bonnet 2, 1½ mi se LaWard fld, ran low on field sand and abnd 5425 ft.

Jim Hogg County—Sal Vieja Oil Co.'s Pena 2, El Peyote gr, 22 mi sw Hebbronville, abnd 3206 ft.

Nueces County—Seaboard Oil Corp. of Del.'s Luby 51, sec. 2, blk 1, 3000 ft w Luby fld, abnd 5194 ft.

Webb County—Transwestern's Garza 1, sur 680, 1 mi e Carolina-Texas field, abnd 2400 ft.

Zapata County—Dulup Oil Co.'s Garcia 5-C, at Escobas, comp 428-48 ft, pumped 5 bbls, new sand.

TEXAS GULF COAST
FIRST REPORTS

Chambers County—H. E. Williams, Rod Montgomery and V. N. Carter's Trinity Rice Disposal Co. 1, 4 mi w of Winnie, ne part of county, sec 45, T&NO sur, lcn for 8000-ft test.

Liberty County—Rowan Dr. Co., Hebert & Smith's B. F. Willis 1, 3½ mi se of Felicia, sec 7, HT&B sur, lcn.

Waller County—Kirby Pet. Co. & John Mayo's Donigan 1, John McFarland sur, 1350 ft w of Donigan 1, sp on 6000-ft test.

COMPLETIONS

Jefferson County—British American et al's Texas 2-71, Gulf of Mexico, State tract 71, td 6721, 9⅝-in csg 5096 ft, perf 4982-92 ft, 291 bbls, 12/64-in ch, tp 800, cp 125 lbs, 26.4-gr, td 6721 ft, new fld.

Matagorda County—Stanolind's Huebner 1, sw Bay City, 2125-ac tr, Elisha Hall sur, 5½-in csg 9001 ft, perf 8883-86 ft in Frio sand, 75.56 bbls oil & 26 bbls sw 24 hrs, ⅛-in ch, tp 950 lbs, 39-gr, td 10,500 ft, new fld.

Wharton County—Texas Progress Oil Co.'s Sedlack 1, 4½ mi se Glen Flora, 53-ac tr, WCRR sur, sec 66, abnd 6010 ft, no shows.

EAST TEXAS
FIRST REPORTS

Anderson County—B. T. Royalties Co. (T. B. Slick, Jr.) et al's Coleman 1, nwc tract, J. A. Box sur 10, 5 mi ne Navarro Crossing, lcn.

Limestone County—Zephyr Oil Co.'s Peeples 8, se cor 494-ac lse, R. Scott sur, Travis Peak test for Tehuacana Woodbine pool, rig.

Rains County—L. L. Prock et al's Grimes 1, nwc of ne 95-acre tract, Sam Yandell sur, 5 mi ne Emory, dk.

Wood County—John C. Robbins, Fred Browning et al's Andrews 1, swc of John R. Smith sur, 9 mi n Hawkins, lcn.

FIRST REPORT

Cass County—British-American Oil Prod. Co.'s East Texas Iron Ore Assn 1, sec 760-ac tr, Lavinia Mornen sur, mat.

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MEN IN THE INDUSTRY'S NEWS

WALTER B. SHARP, president of Mission Manufacturing Company, has been named general chairman of the twentieth annual campaign of the Houston Community Chest. James Anderson, vice president of Humble Oil & Refining Company and J. S. Leach, vice president of The Texas Company, are serving on the campaign advisory committee.

BART A. MEYERS, International Petroleum Company, Toronto, has returned from a trip to Colombia, Ecuador and Peru. He formerly was manager of Tropical Oil Company in Colombia, and has a wide circle of friends in the countries he has just visited.

L. J. VAN DIJK, engineer with Caribbean Petroleum Company, Maracaibo, Venezuela, and Lang Proctor, formerly in charge of operations for Sinclair in Mexico, were guests of the Houston chapter of Nomads last week.

C. S. ROSE, formerly Wewoka (Oklahoma) district superintendent for Sinclair Prairie Oil Company, has been transferred to Tulsa as assistant division superintendent over the central district. John B. Rowland, engineer in the Seminole district, will replace Rose.

HOMER HENSLEE, engineer for Sinclair Prairie Oil Company, Tulsa, has resigned to accept a position with Ford, Bacon & Davis Construction Engineering Company, Galveston.

J. W. SEYFFERT, Tulsa district representative for E. I. du Pont de Nemours Company, will give an illustrated discussion on products of the firm before the Purchasing Agents Association of Tulsa on April 22.

JIM COWLES, engineer for Oklahoma Natural Gas Company, will give an illustrated talk on "Freezing of Gas" before the Engineers Club of Tulsa at the regular noon luncheon program on April 14.

ORVILLE T. BARNETT, vice president of the Southern District, American Welding Society, and associated with Black, Sivalls & Bryson, Inc., Oklahoma City, discussed "Procedure Control of Welding" before the Tulsa section of the American Welding Society, April 11.

IRL GIBBS, 54, district manager for Wilcox Oil & Gas Company at Wichita, died April 6.

W. G. GREEN, president of Engineering Laboratories, Inc., was the principal speaker at a recent meeting of the Purchasing Agents Association of Tulsa. Following the discussion, members made an inspection through the firm's laboratories at 620 East Fourth Street, and witnessed a new picture by the Seismograph Service Corporation showing seismographic operations.

JAMES A. THOMAS, export manager of The Parkersburg Rig & Reel Company, New York, recently addressed the student chapter of the American Society of Civil Engineers at the Thayer School of Civil Engineering, Dartmouth College, Hanover, New Hampshire, on "The Opportunities for the Engineer in the Oil Industry."

H. H. COFFIELD, of Rockdale, Texas, member of the producing firm of Coffield & Guthrie, Inc., is associated with a financial group that purchased the 17-story Kirby Building in Dallas for $2,413,000.

J. L. and E. F. HERSCHBACH, Dallas operators, and J. T. McCulloch, Abilene, Texas, have organized the Herschbach-McCulloch Drilling Company with headquarters at Dallas.

W. H. and G. M. McGARR and Eumund C. Yates, all of Abilene, Texas, have organized the M. & M. Production Company with a capital stock of $10,000.

JAMES P. GILLIES has been engaged by Chicago Pneumatic Tool Company to assist in general sales activities.

LEO RANNEY, New York, president of Ranney Oil Mining Company, delivered an address on "Horizontal Drilling for Oil and Water" before a joint session of the Petroleum Engineers' Club and Geological Society of Fort Worth on April 7.

GEORGE B. McCAMEY, president of Cordova Union Oil Corporation, Fort Worth, and co-discoverer of the West Texas field bearing his name, spent several days last week at his company's wildcat prospect near New Madrid, Missouri.

MORGAN WILKINS has been named manager of a new store of Frick-Reid Supply Corporation at Sandyville, West Virginia, to serve the Oriskany sand area. Wilkins will work under F. M. Fisher, district sales manager with headquarters at Pittsburgh.

P. E. FITZGERALD, of Dowell Incorporated, recently discussed "Acidizing Oil Wells" before the Petroleum Engineering Club of A. & M. College of Texas.

O. A. SCHILLING, sales engineer in the Gulf Coast area for Mechanical Goods Division, Goodyear Tire & Rubber Company, has been named Mid-Continent district manager with headquarters at Dallas. He is succeeded in the Gulf Coast area by W. R. Burtle, formerly at Louisville. Burtle will make his headquarters at Houston.

O. A. Schilling

W. R. Burtle

ERNIE FOWKS, president of the Los Angeles Chapter of Nomads, last week announced additional members and revisions of standing committees.

Fred Ripley is chairman of the membership, induction and ritual committee. Members are Wallace Sawdon, vice chairman; R. R. Smith, induction master, and Jack Ballaugh.

Bob Eiche and Roy Hitchcock are chairman and vice chairman, respectively, of the entertainment committee. Members are Lou Bronson, George Trembley, Roland Smith, Waldo Moore, Custer Morrow, Knight Templeton and Tom Murphy.

S. C. HILL, Norman, and C. L. Hight and James A. Bradshaw, both of Oklahoma City, have organized H. & H. Drilling Company as an Oklahoma Corporation with headquarters at Oklahoma City.

THOMAS R. WEYMOUTH, vice president, Columbia Gas & Electric Corporation, retired from active service effective April 1. He originated the Weymouth formula for computing gas flows in pipe lines and is the author of numerous empirical formulas in the natural gas field.

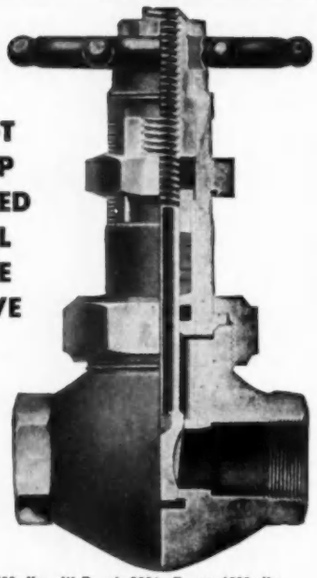
NOAH F. ANDREWS, head of Union Drilling & Producing Company, has announced organization of Union Rotary Corporation with headquarters at Mt. Pleasant, Michigan. Principals of the new company are Andrews, president; Frank Larimer and William D. Donaldson, Jr., vice presidents; Earl W. Andrews, secretary-treasurer, and Ollie Irvin, general manager.

DR. C. E. DOBBIN, United States Geological Survey, Denver, last week discussed "Economic Importance of Minerals in Present World Affairs" at the monthly technical session of the Oklahoma City Geological Society.

DR. MALVIN G. HOFFMAN, Tulsa, discussed "Soil Analysis" before the April meeting of the Northeast Oklahoma Chapter, American Petroleum Institute, held in Bartlesville. Emby Kaye, Distillate Engineering & Processes Company, discussed "Recent Developments in Distillate Recovery." Reda Pump Company sponsored an inspection trip through its plant, followed by a buffet supper. H. W. Ladd, head of the materials department of Stanolind Oil & Gas Company, is chairman of the chapter.

J. U. TEAGUE, Hogg Oil Company, has been elected president of the Houston Technical Club. C. F. Whaley, Petroleum Well Service Company, was elected vice president, and Roy Bandy, Wilson Supply Company, secretary-treasurer.

E. W. PYLE, The Wolf Creek Oil Company, Wichita, is chairman of the Kansas Steering Committee on Oil Field History, Mid-Continent Oil & Gas Association. Members are Guy T. Berry, Big Brother Oil Company, Independence, Kansas; E. L. Bradley, Bradley Brothers, Wichita; James I. Daniels, Pryor & Lock-



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MEN IN THE INDUSTRY'S NEWS

hart, Inc., Wichita; Walter S. Fees, Iola; Ben S. Horton, Sinclair Prairie Oil Company, Wichita; Dr. K. K. Landes, Kansas Geological Survey, Lawrence; A. J. O'Rourke, Skelly Oil Company, Wichita; Lloyd Pickrell, T. C. Johnson, Wichita, and Carl Weiner, Chanute.

JUSTIN BOOTH BRADLEY, 48, president of Empire Gas & Fuel Company and Empire Production Corporation, died March 28 in a hospital at Buffalo, New York.

THOMAS M. HEGGIE, 60, sales engineer for Tulsa Boiler & Machinery Company, Tulsa, died March 19 following a brief illness.

E. C. MONCRIEF, Lauck & Moncrief, Wichita, has been named chairman of the Kansas Steering Committee on Oil Field Names, Mid-Continent Oil & Gas Association. Members are Lee H. Cornell, Stanolind Oil & Gas Company, Wichita; Anthony Folger, Gulf Oil Corporation, Wichita; Leo R. Fortier, Alpine Oil & Royalty Company, Wichita; John W. Inkster, Shell Oil Company, Wichita; L. W. Kesler, Sinclair Prairie Oil Company, Wichita; Edward A. Koester, Darby Petroleum Corporation, Wichita; Theo. A. Morgan, Kansas Corporation Commission, Wichita; E. W. Pyle, The Wolf Creek Oil Company, Wichita; Harold O. Smedley, Skelly Oil Company, Wichita; Z. E. Stucky, Cities Service Oil Company, Wichita; Granville Tierney, Amerada Petroleum Corporation, Wichita, and Charles Wells, The Carter Oil Company, Wichita.

PAUL HELMS has been named purchasing agent for Roller-Smith Company, succeeding Harry A. Cassler, who resigned. Helms joined the company in 1926 as an inspector. He was transferred to the production department a year later, remaining until appointment as assistant production manager in 1930. He was placed in charge of stores in 1931, later became assistant to the plant manager, and was named assistant purchasing agent in 1939.

FRED O. JACKSON, Phillips Petroleum Company, Bartlesville, has been named chairman of the Oklahoma Steering Committee on Oil Field Names, Mid-Continent Oil & Gas Association. Members of the group are J. S. Blackman, Corporation Commission of Oklahoma; Thos. Brownfield, The Carter Oil Company; E. C. Jacobson, Official Nomenclature Maps; J. Howard Johnson, The Texas Company; Paul L. Lyons, Stanolind Companies; Paul Potter, Shell Oil Company, Inc.; Vance Rowe, Petroleum Statistical Guide, Inc.; W. R. Thawley, Gulf Oil Corporation, and John M. Ware, Deep Rock Oil Corporation, all of Tulsa.

SAM BROOKHART, 61, booster station engineer for Stanolind Pipe Line Company, died March 27 at his Graford, Texas, residence. He had been with the company and its predecessor the past 21 years.

S. F. SHAW, consulting engineer of San Antonio, is in Calgary, Alberta, for Anglo-Canadian Oil Company.

B. J. BRUGGE has been named welding consultant and engineer for The Lincoln Electric Company at Washington. He will be engaged in consulting work having to do with application of arc welding in the national defense program, and will be available for such work with all governmental departments. A graduate of Purdue University, he spent two years in the company's research laboratory, served as welding superintendent for Anglo-Iranian Oil Company at Iran, Persia, and for four months was welding consultant engineer for British and Scottish firms in the British Isles. Associated with The Lincoln Electric Company since 1931, he had been located in Los Angeles, and until recently was in Houston.

G. E. CAMPBELL, Sun Oil Company, Tulsa, has been named general chairman of the 1941 Standing Committee on Oil Field Nomenclature, Kansas-Oklahoma Division, Mid-Continent Oil & Gas Association. Jos. L. Borden, The Pure Oil Company, Tulsa, is general vice chairman, and Glenn W. Patchett, Mid-Continent Oil & Gas Association, is secretary to the committee.

Members are W. B. Andrews, Shell Oil Company, Tulsa; W. S. Arthurs, Skelly Oil Company, Tulsa; Sam Baird, Mid-Continent Petroleum Corporation, Tulsa; C. W. Beebe, Shell Oil Company, Wichita; Guy T. Berry, Big Brother Oil Company, Independence, Kansas; E. L. Bradley, Bradley Brothers, Wichita; Thos. Brownfield, The Carter Oil Company, Tulsa; Howard Bryant, Skelly Oil Company, Tulsa; F. A. Bush, Sinclair Prairie Oil Company, Tulsa; Louis Campbell, Magnolia Petroleum Company, Oklahoma City; H. T. Carpenter, The Ohio Oil Company, Tulsa; R. L. Cassingham,

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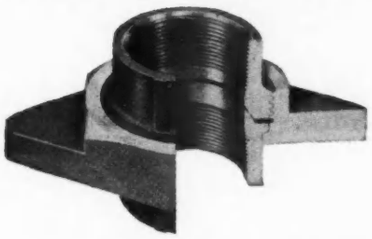

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Also, Anthony Folger, Gulf Oil Corporation, Wichita; Leo Fortier, Alpine Oil & Royalty Company, Wichita; John Galley, Shell Oil Company, Wichita; Wayne Horn, Mid-Continent Map Company, Tulsa; Ben S. Horton, Sinclair Prairie Oil Company, Wichita; John Inkster, Shell Oil Company, Wichita; Fred O. Jackson, Phillips Petroleum Company, Bartlesville; E. C. Jacobson, Official Nomenclature Maps, Tulsa; J. Howard Johnson, The Texas Company, Tulsa; L. W. Kesler, Sinclair Prairie Oil Company, Wichita; Edw. A. Koester, Darby Petroleum Corporation, Wichita; Paul L. Lyons, Stanolind Oil & Gas Company, Tulsa; Ralph L. Marek, Stanolind Oil & Gas Company, Tulsa; H. S. McClintock, Sunray Oil Company, Tulsa; John V. Melton, The Atlantic Refining Company, Shawnee, Oklahoma; E. C. Moncrief, Lauck & Moncrief, Wichita; A. W. Montgomery, Socony-Vacuum Oil Company, Wichita; H. L. Moore, The Atlantic Refining Company, Tulsa; A. F. Morris, Cities Service Oil Company, Bartlesville; R. G. Moss, Phillips Petroleum Company, Wichita; and J. K. Murphy, The British American Oil Producing Company, Tulsa.

Also, George H. Norton, The Atlantic Refining Company, Wichita; A. J. O'Rourke, Skelly Oil Company, Wichita; Lloyd Pickrell, T. C. Johnson, Wichita; C. H. Pishney, Amerada Petroleum Corporation, Tulsa; Paul Potter, Shell Oil Company, Tulsa; E. W. Pyle, The Wolf Creek Oil Company, Wichita; W. L. Rinaman, Oklahoma Natural Gas Company, Tulsa; Vance Rowe, Petroleum Statistical Guide, Inc., Tulsa; Dudley F. Rumney, Gulf Oil Corporation, Tulsa; G. A. Schwab, Barnsdall Oil Company, Tulsa; Harold Smedley, Skelly Oil Company, Wichita; P. R. Smith, The Pure Oil Company, Tulsa; Norville D. Snyder, Kansas Blue Print Company, Wichita; B. F. Southerland, The Atlantic Refining Company, Wichita; Ralph C. Steinman, Sinclair Prairie Oil Company, Tulsa; R. B. L. Stratton, Tide Water Associated Oil Company, Tulsa; Z. E. Stucky, Cities Service Oil Company, Wichita; W. R. Thawley, Gulf Oil Corporation, Tulsa; Granville Tierney, Amerada Petroleum Corporation, Wichita; John M. Ware, Deep Rock Oil Corporation, Tulsa; Carl Weiner, Chanute, Kansas; Charles Wells, The Carter Oil Company, Wichita; and G. V. N. Yates, I. T. I. O. Company.

HARRY L. STRUBE, assistant chief engineer for Link-Belt Company at Philadelphia, has been named chief engineer for the company's Eastern Division, succeeding F. F. Waechter, retired. Strube will make his headquarters at Philadelphia. He started in the engineering department of the company's Pershing Road Chicago plant in 1910. Subsequently, he served as sales engineer, first at Chicago and then in Philadelphia. In 1924 he was made manager of vibrating screen sales, and became assistant chief engineer in 1934.

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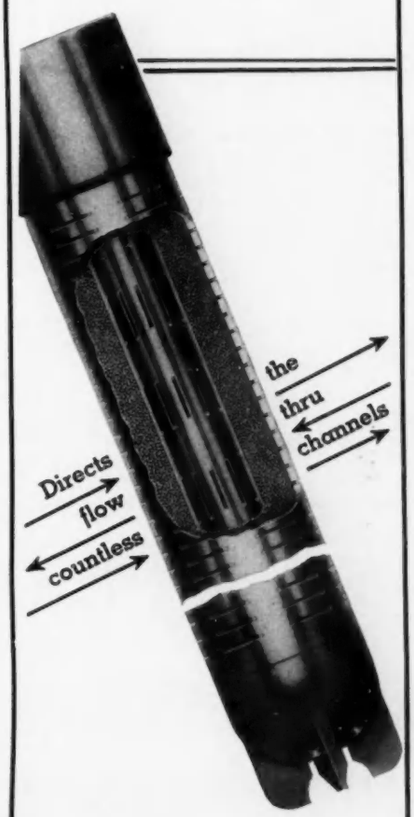

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Squeaks from the Bull Wheel

Cooperation

"May I have a day off, sir, to help my wife with the spring cleaning?"

"No, I'm afraid not—"

"Thanks a lot; I knew I could rely on you."

Veteran Speaks

Father, what's the difference between a gun and a machine gun?

There is a big difference. It is just as if I spoke, and then your mother spoke.

Comment

Some folks would rather blow their own horn than listen to the Marine band.

When you argue with a fool, be sure he isn't similarly engaged.

The two most important muscles which operate without the direction of the brain are the heart and the tongue.

—Rays of Sunshine.

Adroit

That peerless politician, Mark Hanna, was once making an inspection of one of his factories when he overheard one young employe remark to another, "I wish I had old Hanna's money, and he was in the poor-house."

"Then what would you do?" inquired Hanna, suddenly confronting the speaker.

Quick as a wink the young man replied, "Well, I guess the first thing I would do would be to get you out of the poor-house."

"Push that boy along," Hanna remarked later to his superintendent. "He's too good a politician to keep down."

Experienced Party Goer

"Your friend Joe seemed to be the life of the party."

"Yes, he was the only one who could talk louder than the radio."

High Cost of Living

Rover—I haven't seen a bone for a month. I wonder what's up?

Fido—Meat prices.

Black Out

A mother noticed one night that her high school son who was getting ready to go to a dance got dressed in record time.

"Boy, did you take a bath?"

"No."

"Now listen, son, you wouldn't go to a dance without taking a bath, would you?"

"Sure I would. It's not formal."

Heil!

"Do you believe in the survival of the fittest?"

"I don't believe in the survival of anybody. I am an undertaker."

Revelations

"I say, Joe, your girl looked sort of tempting in that sort of Biblical gown she was wearing last night."

"What do you mean, Biblical gown?"

"Oh, you know. Sort of lo and behold!"

Progress

Mother: "When I was young, girls never thought of doing the things they do today."

Daughter: "Perhaps that's why they didn't do them."

High Aim

"Will your wife hit the ceiling when you come in at this hour?"

"Probably. She's a rotten shot."—The Keel.

A Good Start

The first morning after the honeymoon, the husband got up early, went down to the kitchen and brought his wife her breakfast in bed. Naturally, she was delighted. Then her husband spoke:

"Have you noticed just what I have done?"

"Of course, dear; every single detail."

"Good. That's how I want my breakfast served every morning after this."

Ominous

In a certain village there is a cottage with a door which must be raised a little to be opened, and for this purpose a hatchet is used. One night a knock came at the door, and a youngster was sent to see who was there.

"Who it is?" inquired the boy.

"It's me," said the voice outside.

The youngster, recognizing the voice, shouted back, "It's Mrs. Murphy; get the hatchet."

Mrs. Murphy didn't wait.

Double-Jointed

What sort of fellow is Greene?

Oh, he's one of those people who will pat you on the back before your face, and hit you in the face behind your back.

Heard on the Links

At the last home talent golf tournament the club secretary caught one of the entrants driving off about a foot in front of the teeing mark.

"Here!" he cried indignantly, "you can't do that. You're disqualified!"

"What for?"

"Why, you're driving off in front of the mark."

"G'wan back to the clubhouse," he said tersely. "I'm playing my third stroke.

Bird of Paradise

"That chicken I bought yesterday had no wish-bone."

"It was a happy and contented chicken, madam, and had nothing to wish for."

Recipe for Happiness

"Tell me how you and your wife have lived so happily together all these years."

"Simple enough. She goes her way and so do I."

A Positive Situation

My wife talks to me positively awful.

That's nothing. Mine talks to me awfully positive.

Naturally

An old Edinburgh Doctor of Divinity, whose nose and chin were both very long, lost his teeth, and the nose and chin were thus brought very close together.

A friend, looking him in the face one day, exclaimed, "I am afraid, Doctor, your nose and chin will fight before long; they approach each other very menacingly."

"I am afraid of it myself," replied the venerable Scot, "for many words have passed between them already."

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& COOLERS
GOTT Water Coolers are the convenient way to keep drinking water handy to the worker, protect it from impurities. Their exclusive construction keeps water cool for long periods. Snug fitting large removable top, handy non-leaking push button faucet. GOTT Water Cans for handy field use. Your Supply Store has them, get one today! . . . .
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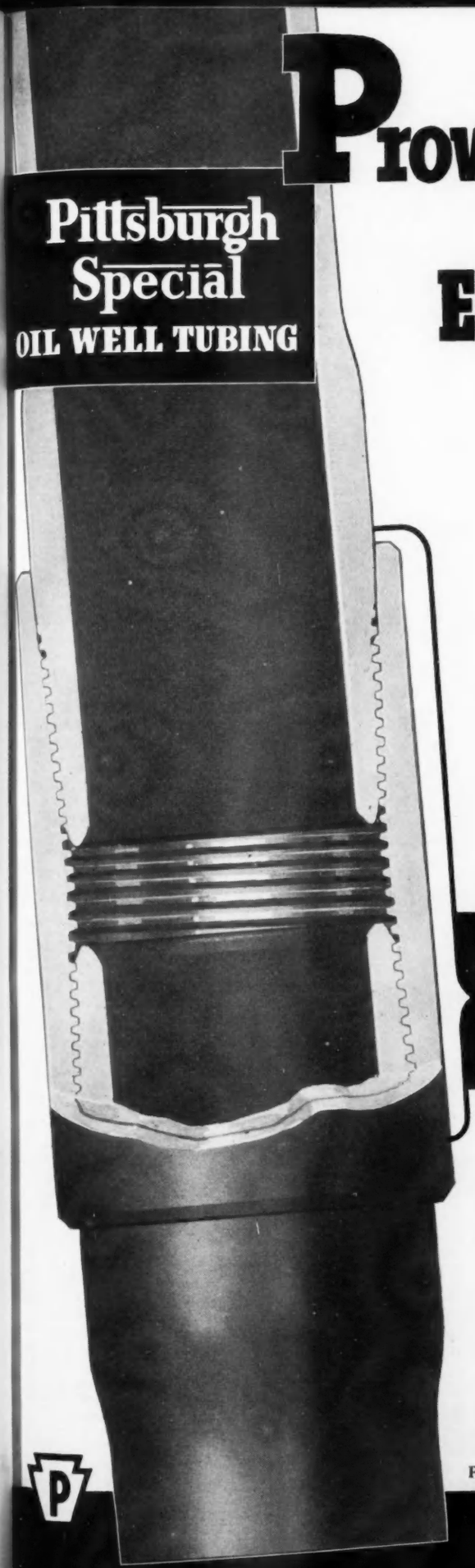
KEEP PURE DRINKING WATER ALWAYS HANDY



Pittsburgh Special
OIL WELL TUBING

Proving EXTRA value through EXTRAordinary service!

More than all the words we can say, the remarkable *performance* records of Pittsburgh Special Oil Well Tubing prove its outstanding value and extra-service capabilities.

A good example of the many uses to which this superior pipe may be applied, is that involving operations at Glenn McCarthy's Chocolate Bayou Munsen No. 1 Well.

Here the tubing string made scores of round trips in and out of the well—for squeezing, drilling out, testing, washing over and cutting out some tubing which had been accidentally cemented in, packing, and perforating. Yet *after* performing these gruelling extra-service jobs, withstanding pressures as high as 7100 lbs. without the slightest semblance of a leak or failure of a single length, 11,700 ft. of it was then set in the well, where, still leakproof, it continues to perform as a production string!

Note the features of construction which, combined with *Pittsburgh* quality and craftsmanship, are responsible for such superior performance. Write for additional information or consult Pittsburgh's complete catalog in the 1941 Composite Catalog.

PITTSBURGH STEEL COMPANY · PITTSBURGH, PA.

NEW YORK CLEVELAND DETROIT CHICAGO TULSA HOUSTON LOS ANGELES

Pipe Storage Yards: Memphis, Tenn. . . . Houston, Texas . . . E. San Pedro, Calif.
Export Distributors: Lucey Export Corporation . . . . . New York, N. Y., U. S. A.

Extra features that make possible Multiple-duty uses

THE SHOULDER SEAL, IN ADDITION TO THREADED SEAL, SHUTS OUT CORROSIVE AND EROSIVE FLUIDS; THE RESULTING DOUBLE SEAL PREVENTS GAS OR OIL LEAKAGE AT HIGH PRESSURES, EVEN AFTER NUMEROUS ROUND TRIPS.

STURDY SIX-PITCH TYPE THREADS PROVIDE QUICK, FOOL-PROOF STABBING AND FAST RUNNING, AND MAKE AND BREAK REPEATEDLY WITHOUT GALLING.

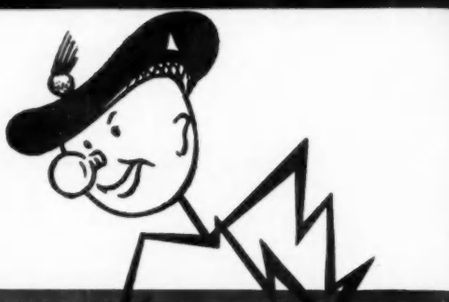
ADDED SHOULDER CONTACT, TAPERED IN EXACT ALIGNMENT WITH THE THREADS, PROVIDES EXTRA STRENGTH WHICH SUPPORTS AGAINST FATIGUE AND ELIMINATES V-NOTCH WEAKNESS IN LAST ENGAGED THREAD.

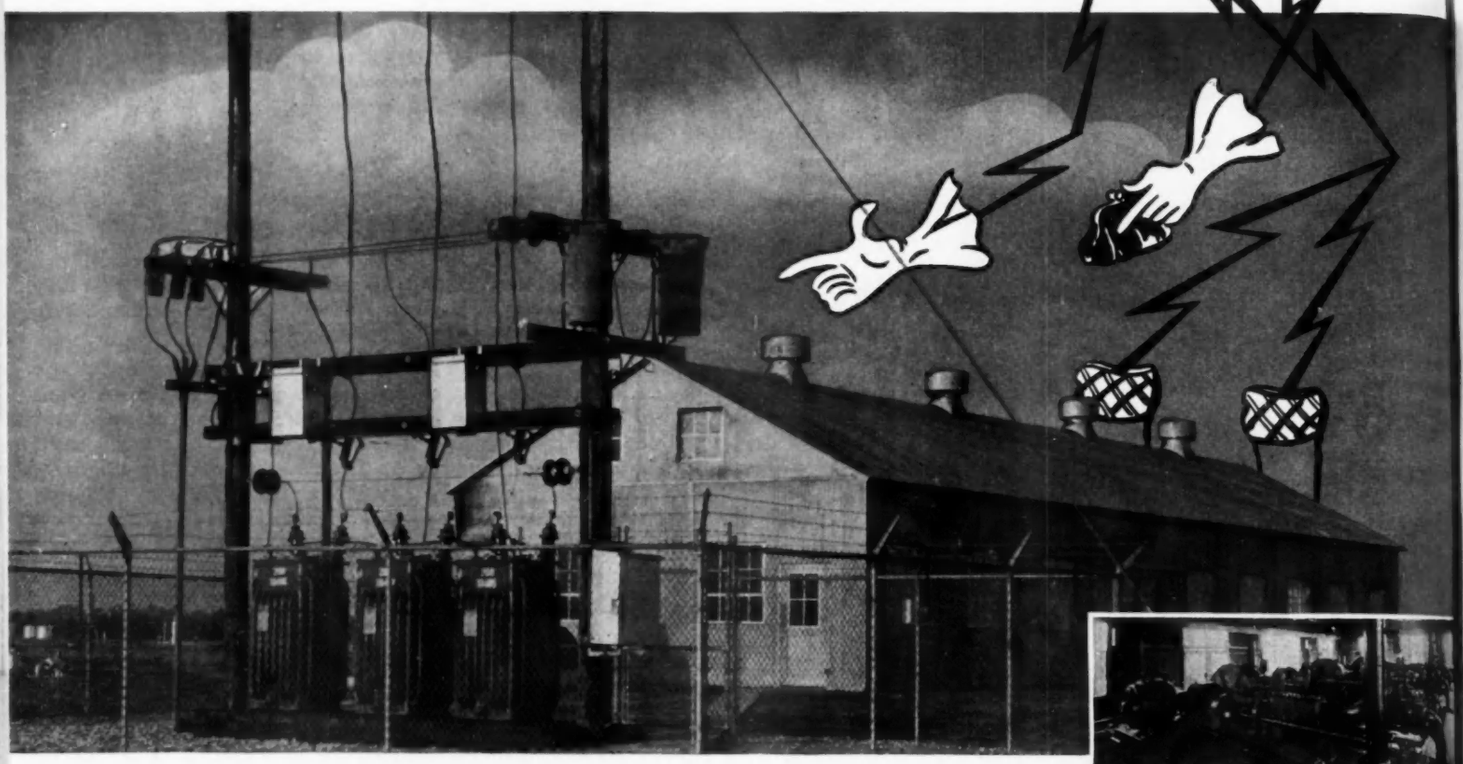
THE GRIPPING POWER OF THE TAPERED SHOULDER INCREASES AS THE JOINT IS TIGHTENED, AND THE DESIGN PERMITS FULL MAKE-UP, REPEATEDLY.

Patent No. 1,942,518

Pittsburgh Special
CASING *and* OIL WELL TUBING
with Acme Thread and Tapered Double Grip Joint

LOW FINAL COST





CAUSES INCREASING DEMAND FOR

Utility Electric Power

Pipeline operators save approximately $2,000,000 annually by using Utility Electric Power. This substantial saving, based on a careful study of the pipeline industry, takes into consideration savings in capital investment, maintenance, operating labor, and in fuel. Specifically, here are some of the advantages which effect these savings:

(1) The induction motor-driven centrifugal pump (3600 R.P.M.) station can be installed for about 40% of the cost of any other prime mover type of pump station.

(2) Maintenance cost is about 1/20 that of any other type pump station.

(3) Operating labor cost is only 1/3 that of any other type pump station.

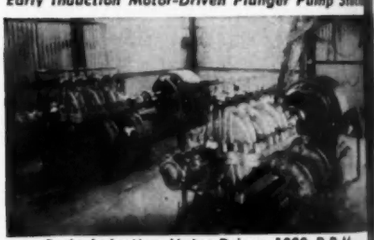
(4) The salvage value of the induction motor centrifugal pump station may approach 75% of the original cost, at most any period of its life, whereas other types of pump stations the salvage value will not exceed 50% of the original cost.

(5) The electric power consumed by the induction motor-driven centrifugal pump station is on a "pay-as-you-go" basis—No capital power investment necessary.

In the past 15 years, Utility Electric Power has provided ¼ of the Pump Station capacity for trunk pipelines. An average increase of 10,000 to 20,000 H.P. is installed annually for pipeline operation, as the result of increasing acceptance of Utility Electric Power.

How Utility Electric Power *can save money for you* can be better told by your Electric Power service company. Why not ask them for facts concerning your specific problems?

Early Induction Motor-Driven Plunger Pump Stati



Early Induction Motor-Driven 1800 R.P.M.

Modern Synchronous Motor-Driven 1800 R.P.M.

Modern 2-Way or Double Pipe Line Induction Motor-Driven 3600 R.P.M.

PROFIT BY Utility ELECTRIC POWER

ECONOMIC POWER FOR DEFENSE

Just as the Petroleum Pipe Line Industry saves millions of dollars annually by using Utility Electric Power, the electric utilities stand ready at this time in the interests of National Defense to supply such additional requirements which the pipe line industry may be called upon in order to effect further economies.

Use Utility Electric Power!

PETROLEUM ELECTRIC POWER ASSOCIATION

Box 1498, Oklahoma City, Oklahoma

NOTES FOR THE Equipment Buyer and User

Tubing Hanger

LARKIN PACKER COMPANY

A forged steel tubing hanger, designed to support and pack a tubing string in a Berry pattern casing head, has been announced by Larkin Packer Company, St. Louis, Missouri. It employs the same slips used in the company's other tubing heads.

The top nut is threaded 1½ inches

Larkin Packer's Tubing Head

long with 8-pitch Zincoted straight V-threads. Hanger has split steel ring, ¼-inch thick, between top nut and rubber packing to provide additional safety against blowouts, to eliminate friction between top nut and packing, and to prevent tearing or cutting split packing when screwing the top nut.

Two split packing rubbers are designed to permit staggering splits to give a pressure-tight seal off with less weight on the packing. The packing is installed above the slips to permit replacement without disturbing tubing or surface connections, the construction being designed to allow the packing effect to be controlled independent of the tubing weight. None of the tubing weight rests on the packing.

A heavy spring, fitted into a groove around the slips, is designed to hold three segments in alignment to provide a flat surface for the packing and to prevent cutting and pinching the tubing. The slips are four inches long, machined and hardened. Removable slip handles are provided for convenience in landing or adjusting the tubing.

The forged steel body is available for casing sizes from 5½- through 8⅝-inch. Slips, packing, steel ring and top nut are interchangeable in the different bodies, and are made to suit either 2- or 2½-inch regular or upset tubing.

Motors

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pennsylvania, has issued Bulletin 3706.1 describing fan-cooled explosion-resisting motors. It discusses application of large motors in Class 1, Group D hazardous locations; ventilation and explosion resisting principles are explained, and motor parts are described. Frame size and horsepower data for use on 3-phase, 60-cycle lines are given, together with physical dimension and a section viewing a 32-frame motor.

Thermometers

Manning, Maxwell & Moore, Inc., Instrument Division, Bridgeport, Connecticut, has announced the 1941 edition of its catalog covering American industrial thermometers.

Jack

TEMPLETON, KENLY & COMPANY

A new cable reel jack, designated Simplex Model 3-CR, and designed to speed handling of cable reels so that cable, wire rope, barbed wire or rope can be quickly paid out or readily rolled onto the reel, has been announced by Templeton, Kenly & Company, 1020 South Central Avenue, Chicago.

The jack is mounted on a T-shaped laminated oil-treated oak base with three supporting rods for stability. A lifting hook on the head of the jack accommodates spindles up to 2¼-inch in diameter.

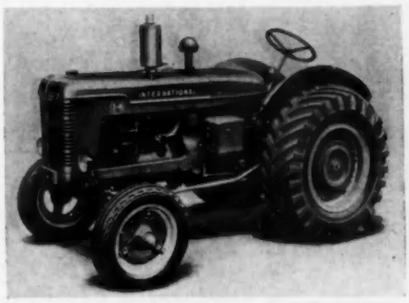
Ratchets, used in pairs, one on each side of the reel, have a capacity of 15 tons and are designed for fast lifting and lowering either loaded or empty reels.

Tractors

INTERNATIONAL HARVESTER COMPANY

A line of five-wheel tractors, designated the "I" line and including three models with carburetor-type engines and two with diesel engines, has been announced by International Harvester Company, 180 North Michigan Avenue, Chicago.

The new tractors feature Tocco-hard-

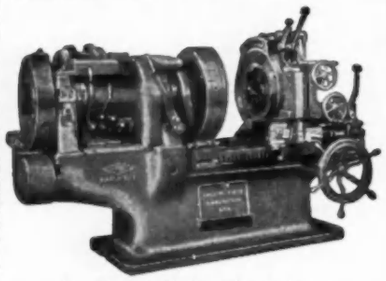


International's Model I-4 Tractor

ened crankshaft, pressure lubrication, replaceable cylinders, five forward speeds, gear drive, countershaft brakes that may be individually controlled or interlocked and provision for mounting a variety of allied equipment. Three of the models have forward speeds up to 15 miles an hour, and two up to 14 miles an hour.

Models of the carburetor-type engines are designated as I-4, I-6 and I-9, and engines are 4-cylinder valve-in-head type. The Model I-4 engine develops 29.5 horsepower at rated governed speed of 1650 revolutions; the I-6 engine 40.5 horsepower at rated governed speed of

WEIGHT INDICATOR POINTS
It's an old Martin-Decker custom to give the customer what he wants . . . but at the same time Martin-Decker wants the customer to have the instrument best suited to his job.
Take Tool Pusher Model Weight Indicators and Unitized Mud Pump Gauges, for example. These instruments are fine for some jobs. But as drilling problems become more complex, such instruments—located at great distances from the driller—cannot be expected to provide the information needed to meet these problems effectively.
Centralized instrument control with the "Sealtite" Weight Indicator, "Sealtite" Mud Pump Gauge, Torque Gauge and Tachometer is the answer.
MARTIN-DECKER CORP. LONG BEACH, CALIF.



New Landis 4¾ Receding Chaser Pipe Threading Machine

COMPLETE LINES

Machine Tools—Metal Working Machinery—Bolt and Pipe Threading Machines—Electric Arc Spot and Butt Welders—Hand Power and Electric Traveling Cranes—Foundry and Forge Shop Equipment.

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Assuring 100% opening of original perforations

Section of retrieved screen showing screen wrapping forced away from original openings without damage to liner.

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Explosive Engineers

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PORTABLE HYDRAULIC CASING PULLING RIGS

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Our service also includes plugging, cementing, etc., for abandoning wells.

DAY OR NIGHT SERVICE

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Houston, Texas
Woodcrest 6-8301

Lake Charles, La.
Phone 3664

NOTES FOR THE Equipment Buyer and User

1450 revolutions, and the I-9 engine 54 horsepower at rated governed speed of 1500 revolutions. Bore and stroke are, respectively, 3⅜ by 4¼ inches; 3⅞ by 5¼ inches, and 4.4 by 5.5 inches.

The diesel-powered tractors, designated ID-6 and ID-9, are, in dimensions and other characteristics excepting engines, respectively similar to the I-6 and I-9. The engines start on gasoline, and may be converted to full diesel operation by means of a lever within reach of the driver.

The engine of the ID-6 develops 38.5 horsepower at rated governed speed of 1450 revolutions, and that of the ID-9 develops 51.5 horsepower at rated governed speed of 1500 revolutions. The bore and stroke of the ID-6 are 3⅞ by 5¼, and of the ID-9, 4.4 by 5.5 inches.

Oil Filter

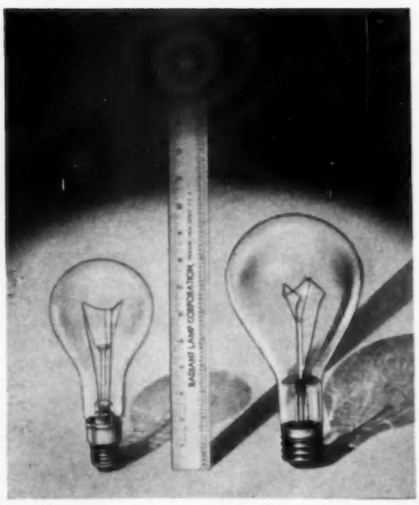
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pennsylvania, has issued Folder F-8599, giving four pages describing oil filtering equipment. It describes a portable system which cleans and dries oil used in transformers, regulators, capacitors and similar equipment. The path of the oil through the equipment and the method of cleaning are shown in diagrammatic form. Features of the oil reconditioning unit are itemized and illustrated.

Lamp

RADIANT LAMP CORPORATION

An electric lamp designed to permit an increase in illumination up to 250 percent without changing fixtures, has been announced by Radiant Lamp Corporation, Sherman Avenue, Newark, New Jersey.

The lamp employs a hard-glass bulb to reduce the size of a 500-watt lamp to that of a 200-watt lamp, and also to permit the lamp to withstand thermal shocks when used outdoors.



Radiant Lamp's high-wattage lamp compared to normal lamp of same capacity.

Flexible Coupling

THE FALK CORPORATION

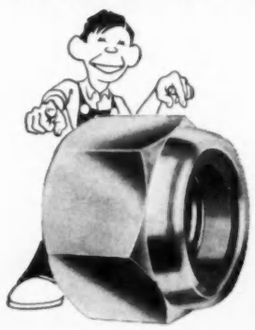
A flexible coupling, designated Airflex and designed for connecting diesel, oil, gasoline or gas engines to any type of driven machinery, has been announced by The Falk Corporation, Milwaukee.

It consists of a resilient rubber gland lined with a premoulded, prevulcanized cylindrical section treated to prevent air loss. The cylindrical lining is covered with multiple alternating layers of tough fabric and live rubber. The entire gland is bonded to rugged steel inner and outer rims. The gland is inflated to proper pressure through a Schrader valve which will take any hand pump fitting or air nozzle. A rubber covered metal cap is designed to prevent foreign material from entering the valve.

Degree of elasticity in the coupling can be varied by changing the air pressure, frequently eliminating the necessity for adjusting the setting of the connected units, or making changes in shaft diameters and lengths, or in the flywheel, to alter the torsional characteristics of the drive system.

The coupling is made in six standard types. Type AR, with both hubs external, is the basic construction and is recommended for new installations where a gap between shaft ends equiva-

» *For reducing* PETROLEUM EQUIPMENT MAINTENANCE COSTS...



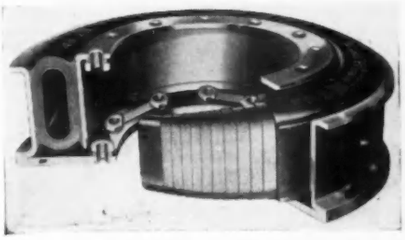
The SELF-LOCKING NUTS that can't be loosened by vibration or hard service

... specify them on new equipment and use them for replacement.

Sold by leading supply houses. Factory stocks in Houston and Los Angeles • *Write for Catalog.*

ELASTIC STOP NUT CORPORATION
2360 VAUXHALL ROAD • UNION, NEW JERSEY

Elastic Stop SELF-LOCKING NUTS



Falk Corporation's Flexible Coupling

lent to the width of the coupling gland can be provided. Type AR, with one hub inverted, is a modification of the basic standard and is intended for use on existing applications where the gap between shaft ends is small, or new installations where available space is very restricted. Type FM, designed particularly for equipment having flywheel on driving or driven shaft, allows gland to be bolted directly to flywheel, eliminating the stub shaft and saving space. Type AR, with thrust unit, is intended for marine propulsion applications and others where it is desired to transmit thrust through the coupling to an adjacent thrust bearing. Type XR, high-speed type, is for applications where speed is beyond the allowable for the basic AR type. A sixth type, disconnecting coupling, is for dual drives and other requirements where a quick-disconnecting coupling is required.

General Offices of Hercules Supply Moved to Houston

Hercules Supply Company has announced removal of its general offices from Fort Worth to 3130 Navigation Boulevard, Houston. The new mail address is Box 2595.

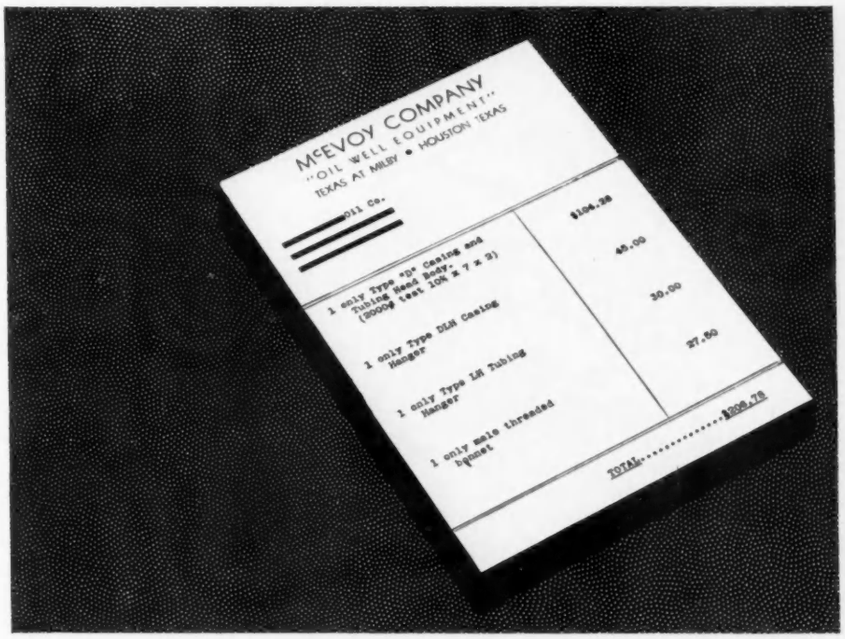
Research on Equipment

Caterpillar Tractor Company, Peoria, Illinois, has issued a 40-page bulletin on "How Precision Insures Caterpillar Quality." It describes in detail and illustrates with shop photographs tests made of equipment parts to insure accuracy.

Wire Rope Blocks, Sheaves

American Hoist & Derrick Company, St. Paul, Minnesota, has issued Catalog 300-BS-1 describing its line of wire rope blocks and sheaves. Various styles are illustrated, and tables give complete specifications.

Pictured is the oil fields sales and service branch opened recently at Odessa, Texas, by Hercules Motors Corporation. Engineering service and complete stocks of gasoline and diesel engines and power units, and replacement parts, are available at the branch.



L O W F I R S T C O S T Here's why McEvoy's prices are the lowest consistent with quality equipment and overall economy.

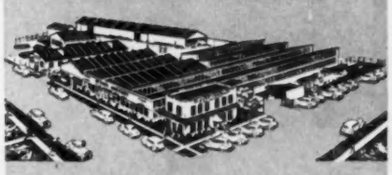
TO GIVE YOU LOW FIRST COST, McEvoy engineers simplify designs wherever practical. This simplification often has the added advantage of making McEvoy equipment more positive in operation and more dependable.

WORK TRAVELS FAST through this plant. Standardized designs and large volume permit us to use mass production methods which result in uniformly high quality and low prices.

UNIFORMLY HIGH QUALITY resulting from mass production methods, reduces the loss from rejects and thus reduces the cost per unit.

COMPARE McEvoy prices. We believe you will be surprised at the low first cost of these products. Then order McEvoy Completion Equipment *for several wells*. Notice the high quality and extreme uniformity of these products. We believe that once you start using McEvoy equipment you won't stop.

McEVOY
COMPANY
Texas at Milby St., Houston, Texas



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Distinctive, **extra** comforts on these two super streamliners with chair cars and diner-lounge-observation (parlor car on "Sunbeam"). Delicious "**Meals** Select" in the diner. Radio in all cars.

CONVENIENT SCHEDULES

Northbound

	HUSTLER	SUNBEAM
Lv. HOUSTON . . .	**8:00 A.M.**	**—4:45 P.M.**
Ar. DALLAS	**1:50 P.M.**	**—9:10 P.M.**

Connections at Dallas—**Hustler**—for West Texas, Colorado, Kansas City, St. Louis, Chicago, New York, East. Hustler also connects at Ennis for Fort Worth. **Sunbeam**—for West Texas, Oklahoma, Arkansas, Colorado, Kansas City, St. Louis.

Southbound

	HUSTLER	SUNBEAM
Lv. DALLAS	**8:00 A.M.**	**—5:00 P.M.**
Ar. HOUSTON . . .	**2:00 P.M.**	**—9:25 P.M.**

Connections at Houston — **Hustler** — for California and West, New Orleans and East; Galveston by Bus.

SUNBEAM—with "Sunset Limited" for California—use tourist sleeper from Houston if you wish, save one-half of Pullman fare. **Sunbeam** also connects with "Argonaut" for Beaumont, New Orleans, East, and with "Border Limited" for Corpus Christi and Valley points.

OWL, popular overnight train between Galveston, Houston, Dallas offers a choice of double bedroom sleeping car, standard sleepers (open 9:30 P.M.) and chair cars.

LOW FARES DAILY — Between Houston · Dallas

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Good in chair cars, coaches

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J. T. MONROE, Passenger Traffic Mgr.

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